PATENTS

Information about the Publication Provisions of the American Inventors Protection Act
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What GAO Found

Of the approximately 805,000 patent applications USPTO received between November 29, 2000, and November 28, 2003, about 88,000 were filed by applicants certifying they would apply for a patent only in the United States. Subsequently, 8,000 of these applicants rescinded this certification. For about 275,000 applications, the applicants indicated they had already applied for a patent abroad. For the remaining 450,000 applications, USPTO’s database does not provide the information needed to determine whether the applicants intend to file in the United States alone or also abroad, as the figure below indicates.

GAO found four differences between the published and unpublished patent applications that USPTO received between November 29, 2000, and November 28, 2003:

- USPTO has published or plans to publish applications from about 85 percent of the applicants qualifying as large entities compared with only about 74 percent of those qualifying as small entities.

- USPTO issued patents to about 22 percent of the applications it had published and considered about 8 percent abandoned, although resolution for most of the approximately 456,000 published patent applications is still pending. For applications it did not publish, USPTO issued patents to about 25 percent and considered about 19 percent abandoned, although resolution for most of these approximately 117,000 applications is also still pending.

- The median length of time for the agency’s review of an issued patent was about 20 months for those applications that had been published and about 15 months for those not published.

- The median length of time between filing an application and when USPTO issued a patent or the application was abandoned.

In commenting on a draft of this report, USPTO provided technical comments that we have incorporated, as appropriate.

[Diagram showing distribution of filings]

Source: GAO analysis of USPTO data.


To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu K. Mittal at (202) 512-3841 or Mittala@gao.gov.
May 20, 2004

The Honorable Orrin G. Hatch
Chairman
The Honorable Patrick Leahy
Ranking Minority Member
Committee on the Judiciary
United States Senate

The Honorable F. James Sensenbrenner Jr.
Chairman
The Honorable John Conyers Jr.
Ranking Minority Member
Committee on the Judiciary
House of Representatives

The U.S. Patent and Trademark Office (USPTO) administers the nation’s patent laws to protect inventions and encourage innovation by examining applications and granting patents to qualified inventors for a period of time. A patent provides inventors with certain property rights to the invention.\(^1\) Between fiscal years 1998 and 2003, USPTO received an average of about 317,000 patent applications annually. Following the enactment of the American Inventors Protection Act of 1999,\(^2\) USPTO significantly changed its processes for publishing patent applications, bringing U.S. patent policy into greater harmony with the policies of most other nations. Effective November 29, 2000, USPTO generally must publish patent applications 18 months after the application is first filed anywhere. Previously, USPTO published patent applications when patents had been issued—for fiscal year 2003, a patent was typically issued about 28 months after the filing of the application.\(^3\) With this new publication requirement, other inventors, in the United States and abroad, may be able to improve upon the invention in the original application and submit their own patent application more

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\(^1\)Specifically the inventor has the right to exclude others from making, using, offering for sale, or selling the invention in the United States or importing the invention into the United States.


\(^3\)The length of time between the filing of an application and the issuance of the patent is commonly referred to as "pendency."
quickly. While the new publication requirement may accelerate the pace of innovation, it also raised concerns among some smaller entities—individual inventors, nonprofit organizations, and enterprises with 500 or fewer employees—that larger competitors might be able to take advantage of the published information and use their greater resources to reap benefits in the marketplace before USPTO has granted a patent to the original inventor.

The 1999 act contains two provisions to address the concerns of these smaller entities. First, it allows all inventors to avoid publication by certifying, when they file their application, that they are, in essence, filing for a patent only in the United States. Generally, applications that do not include such certification are automatically published 18 months after they are first filed. Second, inventors whose applications are published, and who have been issued patents, may be able to collect compensation retroactively to the date of publication from those who use the invention without approval. Since inventors are responsible for enforcing their patent rights, without the aid of USPTO, the potential litigation costs could deter some inventors from seeking to recover reasonable compensation.

While inventors may certify that they are seeking a patent only in the United States, they may rescind their certification at any time. Inventors may rescind their requests for several reasons, such as deciding to seek a patent abroad or to become eligible to collect compensation from others who are using their invention without approval. An applicant who makes a certification and later files in another country directly or under an international agreement must notify USPTO of such filing within 45 days. According to USPTO officials, the agency records in its database both those that specifically rescind their certification and those that provide notice as having rescinded their certification. In both cases, USPTO publishes information on the application as it would for any other application. USPTO does not require patent applicants who do not certify

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4The applicant could also file in 1 or more of the 13 countries, such as Malaysia or Saudi Arabia, that do not require applications to be published within 18 months of being filed. Throughout this report we refer to filing in another country as filing in 1 or more countries that require applications to be published within 18 months of being filed.

5The statute provides for a “reasonable royalty.”

6Throughout this report we include both those that specifically rescinded their certification and those that provided notice as applications for which the certification has been rescinded.
to indicate whether they intend to file in only the United States or whether they also intend to file abroad.

The American Inventors Protection Act required GAO to provide information on patent applications affected by the 18-month publication provisions. In response, we analyzed USPTO’s database for applications submitted to the agency during a 3-year period—November 29, 2000, through November 28, 2003—to determine (1) the number of applications seeking patents only in the United States, the number that requested at the time of filing not to be published, and the number that later rescinded that request; and (2) whether certain differences exist between published and unpublished patent applications. Specifically, GAO examined differences relating to whether the applicant was a large or small entity, the percentage of patents issued by USPTO and applications that were abandoned, and the length of time between the applicants’ filing of an application and either USPTO’s issuing of a patent or the application being abandoned.7

To address these questions, we examined USPTO records of the patent applications filed or published between November 29, 2000, and November 28, 2003. We interviewed program officials to determine how these records are maintained and to interpret the data the records contain. We assessed the completeness and accuracy of the data we used in our review by (1) performing electronic tests of relevant fields and (2) reviewing related program and system documentation, as well as audit and system reviews and reports. We determined that the data were sufficiently reliable for the purpose of our review. For about 44 percent of patent applications, USPTO’s data allowed us to determine whether the applicants sought patent protection only in the United States or in both the United States and other countries. For the remaining 56 percent of applications, we relied on USPTO officials’ best estimates of how many applicants would also seek patent protection outside of the United States. To obtain a better understanding of patent law, we discussed patent issues with USPTO economists and attorneys. We conducted our work from June 2003 through April 2004 in accordance with generally accepted government auditing standards.

7An application that has been declared abandoned is no longer pending. The most common reason for abandonment is when the applicant does not respond to USPTO’s requests for additional information, such as to clarify technical questions or address procedural issues, within the time period provided.
Results in Brief

USPTO’s database does not provide information for many applications regarding whether the applicant intends to file only in the United States or in both the United States and abroad. Of the approximately 805,000 patent applications USPTO received between November 29, 2000, and November 28, 2003, about 88,000 were filed by applicants certifying they would apply for a patent only in the United States. Subsequently, 8,000 of these applicants rescinded this certification. For about another 275,000 applications, the applicants indicated they had already applied for a patent in another country. For the remaining 450,000 applications, USPTO’s database does not provide the information needed to determine whether the applicants intend to file in the United States alone or also in another country.

We found four differences between the published and unpublished patent applications USPTO received between November 29, 2000, and November 28, 2003:

- USPTO has published or plans to publish applications from about 85 percent of the applicants qualifying as large entities compared with only about 74 percent of those qualifying as small entities.

- USPTO issued patents to about 22 percent of the applications it had published and considered about 8 percent abandoned, although resolution for most of the approximately 456,000 published patent applications is still pending. For applications it did not publish, USPTO issued patents to about 25 percent and considered about 19 percent abandoned, although resolution for most of these approximately 117,000 applications is also still pending.

- The median length of time for the agency’s review of an issued patent was about 20 months for applications that had been published and about 15 months for those not published.

- The median length of time between the filing and abandonment of an application was about 18 months for published applications and about 8 months for those not published.

In commenting on a draft of this report, USPTO provided technical comments that we have incorporated, as appropriate.
### Background

USPTO administers the nation’s patent and trademark laws to protect inventions, encourage innovation, and advance science and technology through the preservation and dissemination of patent information. The principal effect of patent law in a market economy is that it provides the economic incentive for inventors to devote resources to technological innovation. Granting the inventor exclusive rights to control the use of the patented invention produces this effect.

Patent rights do not rise automatically, however. Inventors who seek patent protection must first prepare applications that fully disclose and clearly claim their inventions. Before issuing a patent, USPTO examines the application to verify that the patent is new, useful, and nonobvious. See figure 1 for a description of the application examination and publication process. If the agency issues a patent, the inventor has, in most instances, exclusive rights to the invention until 20 years from the date the application was first filed. Patents typically fall into one of three categories: (1) utility—for useful inventions, such as processes, machines, articles of manufacture, or composition of matter; (2) design—for changes in configuration, shape, or surface ornamentation that do not involve changes in function; or (3) plant—for asexually reproducible plants. The publication provisions of the American Inventors Protection Act apply only to applications for plant and utility patents, which constitute most of the applications filed.

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8The term “nonobvious” refers to an invention that would not have been obvious to persons having ordinary skill in the art (subject matter) to which the invention pertains.

9A fourth category, “reissue patents,” refers to patents that USPTO grants as replacements for any patent that was in some way defective. These patents constitute less than one-half of 1 percent of patents issued in fiscal year 2003.

10Since plant patents constitute less than one-third of 1 percent of the patents affected by the act, we did not segregate plant patents from utility patents in our analysis.
Until 1999, USPTO was required to keep in confidence submitted patent applications, and applicants had no enforceable patent rights before the issue date of the patent. The American Inventors Protection Act of 1999 removed this confidentiality, so that, with certain exceptions, such as applications subject to a secrecy order for reasons of national security, patent applications filed on or after November 29, 2000, will be published 18 months after they are first filed. In exchange for the loss of confidentiality and the public dissemination of this proprietary information, the applicant may be able to obtain compensation.
USPTO may publish some applications earlier than 18 months. Some inventors, for example, request that their applications be published early. Applications that are first filed abroad will also normally be published in fewer than 18 months after being filed in the U.S. This is because USPTO designates an application’s publication date as 18 months from when it was first filed, regardless of whether that occurred in the United States or abroad. Applicants who file first in another country and wish to obtain a patent in the U.S. must file with USPTO within a year. If such an applicant took 12 months to file with USPTO, the agency would then publish the application within 6 months. If, for example, such an application was abandoned 9 months after it was published, then USPTO’s database would show that the application was abandoned in 15 months—the number of months that had passed since the application had been filed in the U.S.—rather than the 27 months that had passed since the application had been first filed anywhere.

Proponents of the act believe that the changes brought U.S. patent policy into greater harmony with the policies of nearly all other nations and will increase the rate at which dissemination of new technology occurs, thus speeding the diffusion of knowledge and avoiding the duplication of research expenditures by competing firms. Some inventors, however, objected to the early disclosure requirement of the act. For example, a group of 26 Nobel laureates claimed that this practice would be most harmful to small inventors and would discourage the flow of new inventions. They pointed out that the patents most affected by early disclosure would likely be breakthrough inventions, often made by independent inventors, that take time to progress from application to an issued patent. Independent inventors and smaller entities have also expressed concern that the new law aids larger entities that have greater resources, at the expense of smaller entities. They contend that smaller

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11There are certain conditions attached to this right. Specifically, the unauthorized user must be notified of the patent, the invention as described in the patent must be substantially the same as the one described in the application, and the inventor must litigate within six years of when the patent was issued.

12In accordance with a provision of the March 20, 1883, Paris Convention for the Protection of Industrial Property (as revised), applicants have 12 months from the first filing of a foreign application to file a counterpart application in the United States.
entities are less able to obtain legal redress if larger firms use their inventions without approval, and are less able to keep pace if a larger firm attempts to invent around the patent—that is, to improve the patented device enough to apply for a separate patent.

The 1999 act allows all inventors not intending to seek patent protection abroad to request that USPTO publish the application only when it issues the patent. Such inventors also have the option of rescinding the original request before USPTO issues a patent and asking the agency to publish the application as it would other applications.

USPTO’s database does not provide information for many applications regarding whether the applicant intends to file only in the United States or in both the United States and abroad. Our analysis of USPTO’s database indicates that of the approximately 805,000 applications USPTO received, applicants certified they would apply for a patent only in the United States in about 80,000 applications. Although about 88,000 applications originally included this certification in their applications, about 8,000 applicants later rescinded this certification. Consequently, these 80,000 applications are exempt from the publication provisions of the American Inventors Protection Act because they are filing for patent protection only in the United States. In about 275,000 applications, the applicants indicated they had applied for a patent in another country. As a result, these applications are subject to the publication provisions of the American Inventors Protection Act, and USPTO will publish these applications within 18 months of when they were originally filed.

USPTO’s database does not provide the information needed to determine definitively whether the applicants for the remaining 450,000 applications intended to apply for a patent only in the United States or in both the United States and abroad. However, USPTO officials estimated that for about one-third of such applications, the applicants generally seek patent protection in both the United States and abroad. Applying this proportion to the 450,000 applications for which no information is available, about 300,000 were likely to seek patents only in the United States and about

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13In addition, our analysis shows that as of November 28, 2003, there were about 61,000 applications for which the applicant still had the opportunity to rescind certification.
150,000 were likely to seek patents in both the United States and abroad.\textsuperscript{14} By combining these estimates with the data for the applications that we could definitively identify from the database, we calculated that about 380,000 applications (about 47 percent) likely were filed only in the United States, and about 425,000 (about 53 percent) likely were filed in both the United States and other countries.\textsuperscript{15} See figure 2.

Figure 2: Domestic and Foreign Applications Filed with USPTO, November 29, 2000, through November 28, 2003

\begin{center}
\includegraphics[width=0.5\textwidth]{figure2.png}
\end{center}

\textsuperscript{14}The USPTO officials with whom we discussed these issues estimated that, based on their professional experience, for about one-third of applications filed in the United States filers will subsequently file in another country after filing with USPTO. Use of this estimate should be considered in light of the limitation that this estimate could not be independently corroborated and should be considered only as an approximation. See appendix I for additional discussion.

\textsuperscript{15}We derived 380,000 by combining the 80,000 applications identified in USPTO's database as containing a certification that the applicant would file only in the United States with the 300,000 that are estimated by USPTO officials as likely to have only filed in the United States. We derived 425,000 by combining the 275,000 applications in USPTO's database for which applicants said they had filed in another country with the 150,000 applications USPTO officials estimated are likely to have also filed abroad.
We found four differences between the published and unpublished applications filed with USPTO between November 29, 2000, and November 28, 2003. First, USPTO published, or plans to publish, applications filed by inventors qualifying as large entities at a somewhat higher rate (85 percent) than those filed by inventors qualifying as small entities (74 percent). Of the approximately 580,000 applications filed by large entities, USPTO published about 60 percent and listed another 25 percent as eligible for publication—that is, the applications will be published 18 months after they were first filed. About 12 percent of the applications filed by inventors qualifying as large entities are ineligible for publication—typically because the applicants certified that they will file only in the United States. USPTO's database does not provide the information needed to determine the publication status for the remaining 3 percent.

For the approximately 225,000 applications filed by inventors qualifying as small entities, USPTO published about 46 percent and lists another 28 percent as eligible for publication. About 22 percent of the applications filed by inventors qualifying as small entities are ineligible for publication. USPTO's database does not provide the information needed to determine the publication status for the remaining 4 percent. See figures 3 and 4.

Unpublished applications refer to those that USPTO lists as ineligible for publication.
Figure 3: Status of Applications Filed by Inventors Qualifying as Large Entities, November 29, 2000, through November 28, 2003

Source: GAO analysis of USPTO data.

Figure 4: Status of Applications Filed by Inventors Qualifying as Small Entities, November 29, 2000, through November 28, 2003

Source: GAO analysis of USPTO data.
Second, although the rate at which USPTO issued patents to published and unpublished applications differed only slightly, the rate at which applicants abandoned published applications and unpublished applications differed significantly. Of the approximately 456,000 applications USPTO published, about 70 percent are still pending, about 22 percent were issued patents, and 8 percent were considered abandoned. Similarly, of the approximately 117,000 applications USPTO did not publish, about 56 percent are still pending, about 25 percent were issued patents, and 19 percent were considered abandoned. For a summary of these differences, see table 1.

Table 1: Comparison of Published and Unpublished Applications, November 29, 2000, through November 28, 2003

<table>
<thead>
<tr>
<th>Number</th>
<th>Published (% of total)</th>
<th>Unpublished (% of total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issued as patents</td>
<td>102,200 (22)</td>
<td>29,300 (25)</td>
</tr>
<tr>
<td>Abandoned(a)</td>
<td>37,300 (8)</td>
<td>22,300 (19)</td>
</tr>
<tr>
<td>Pending</td>
<td>316,200 (70)</td>
<td>65,500 (56)</td>
</tr>
<tr>
<td>Total(b)</td>
<td>455,700 (100)</td>
<td>117,100 (100)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Median pendency in months</th>
<th>Published</th>
<th>Unpublished</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filing to patent issue</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Time to abandonment</td>
<td>18</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: GAO analysis of USPTO data.

Note: Numbers are rounded to the nearest 100.

\(a\)According to USPTO officials, the difference in the rate at which published and unpublished applications are abandoned occurs primarily because nearly all patent applications abandoned within about 18 months of filing are listed as unpublished.

\(b\)This analysis excludes approximately 206,000 applications USPTO considers eligible for publication but that have not been neither issued nor abandoned, and approximately 26,000 applications that have not yet reached the stage at which publication status can be determined.

Third, USPTO took longer to issue patents that had been published (a median time of about 20 months) than those that had not been published (about 15 months). According to agency officials, the difference occurs primarily because examiners sometimes complete their review and decide to issue a patent in fewer than 18 months. In these cases, USPTO does not publish the application because the issued patent will itself be published and become public information. As a result, the median length of time for unpublished patents is less.
Fourth, for applications considered abandoned, the median length of time between filing and abandonment was longer for published applications (about 18 months) than for those not published (about 8 months). According to USPTO officials, this difference occurs primarily because nearly all patent applications abandoned within about 18 months of filing are not published.

**Agency Comments and Our Evaluation**

In commenting on a draft of this report, USPTO provided technical comments that we have incorporated, as appropriate.

We are sending copies of this report to the appropriate House and Senate committees; interested Members of Congress; the Secretary of Commerce; the Director, USPTO; the Director, Office of Management and Budget; and other interested parties. We are also providing copies to others upon request. In addition, the report is available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-3841. Key contributors to this report are listed in appendix II.

Anu K. Mittal
Director, Natural Resources and Environment
To provide information on the patent applications affected by the American Inventors Protection Act of 1999, we analyzed data obtained from the U.S. Patent and Trademark Office’s (USPTO) Patent Application Location and Monitoring system (PALM). We used these data to determine the number of applications USPTO received, the number of applications certifying that they would be filed only in the United States, and the number that rescinded this certification. PALM also contained data we used to determine whether applicants had filed an application for the same invention in another country before filing with USPTO. In addition, we used PALM data to analyze whether differences existed between published and unpublished applications in terms of the relative size of the applying entity, the length of time USPTO reviewed the application before it was issued or abandoned, and the rate at which applications were issued or abandoned.

In about 44 percent of the cases, the USPTO data provided information about whether applicants sought patent protection only in the United States or in both the United States and elsewhere. For the remaining 56 percent of the cases, USPTO’s database does not provide the information needed to determine whether the applicants have filed or intend to file in the United States alone or also in another country. We discussed other possible sources of information about these cases with USPTO program officials, attorneys, and economists. These USPTO officials noted that while they had conducted one study that provided some data as to whether applicants filed in the United States alone or also in another country, the limitations of the study’s methodology and results precluded any statistically valid use of the information. Three other studies we examined had similar methodological limitations that precluded their use.

The USPTO officials with whom we discussed these issues estimated that, based on their professional experience, for about one-third of the applications filed in the United States, applicants may subsequently file in another country after filing with USPTO. Although we used this estimate to determine the potential number of applications that may have been filed in the United States only and in both the United States and abroad, use of this estimate should be considered in light of the limitation that it could not be corroborated by other methodologically sound independent sources.

1We analyzed applications that were either (1) filed between November 29, 2000, and November 28, 2003, or (2) filed before November 29, 2000, and had a request for publication.
We assessed the reliability of USPTO's PALM data that we used in our analysis by (1) performing electronic testing of relevant data elements, (2) reviewing existing information about the data and the system that produced them, (3) interviewing agency and contractor officials knowledgeable about the data, and (4) reviewing audit and system reports on accuracy of data entry performed by contractors. We determined that the data were sufficiently reliable for the purposes of this report.

To determine if studies analyzing the impact of the American Inventors Protection Act had been conducted by any other entity, we interviewed officials from the Intellectual Property Owners Association, the American Intellectual Property Law Association, and the National Intellectual Property Researchers Association. To explore the practicality of conducting a survey of patent attorneys to determine how many patent applications were filed only in the United States or in both the United States and abroad, we contacted patent attorneys around the United States representing private legal firms, corporations, academia, and government. After discussions with these officials, we concluded that a survey was not feasible because of concerns about attorney/client confidentiality.

We conducted our work from June 2003 through April 2004 in accordance with generally accepted government auditing standards.
### GAO Contacts and Staff Acknowledgments

#### GAO Contacts

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<thead>
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#### Staff Acknowledgments

In addition to those named above, Oliver Easterwood, Judy Pagano, Elsie Picyk, Paul Rhodes, Stuart Ryba, Carol Herrnstadt Shulman, and Mindi Weisenbloom made key contributions to this report.
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