

# Patent FAQ

Many questions arise in determining whether to seek patent protection for new inventive technology. This memorandum sets forth some of the information which one should know prior to pursuing an application for a patent.

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## **A Patent as Property**

A patent is a document which describes the invention and concludes with a series of paragraphs called claims, which are the legal definition of the invention owned by the patent owner. A patent gives its owner the right to exclude others from making, using or selling the invention covered by the claims of the patent; it does not give the owner the right to make, use, or sell the invention. This right to exclude others is enforced by bringing a suit against an alleged infringer in a United States Federal District Court. In a patent infringement suit, this right to exclude is dependent upon the court determining that the claims of the patent are valid and that the claims cover the product or process of the infringer.

Patent claims vary significantly in scope. Patents on pioneering inventions receive “broad” claims while other patents on improvements may receive only “narrow” claims. Most commonly, the claims allowed by the U. S. Patent and Trademark Office are narrow in that they only address a specific embodiment of the invention since other embodiments were previously a part of the public domain.

Obviously, the broader the legal definition of the invention in the claims, the more valuable the patent. However, even narrow claims may be valuable if those claims are directed to features which give the product significant commercial value.

Although the value of a patent is significantly influenced by the breadth of the claims, the value is not solely determined by the claims. A patent also provides secondary values. For example, a patent or patent application may be of value as a marketing or advertising tool; or support a manner of doing business or contracting by which taxes are saved; or may add strength to a franchise or know-how license; or constitute the foundation of a defense against a charge of infringement of a third party's patent; or be the basis for winning an interference with a competitor's patent application. Further, many narrow patents also earn substantial royalties or may require a would-be infringer to make design modifications which reduce the sales appeal of his products.

The decision on whether or not to file a patent application should be based upon an assessment of the likelihood of obtaining patent protection, the scope of that protection, the commercial potential of the invention, the various different values of the particular type of patent to be obtained, and the uses to which the patent may properly be put in the industry to which the particular invention relates.

## **Patent Costs**

The cost of obtaining a patent varies tremendously with the complexity of the technology of the invention. Obviously, a patent application on an invention with no moving parts will be much less expensive than an invention with a hundred moving parts. The cost of a patent might well be compared to the cost of purchasing an automobile. Estimates cannot be quoted without a thorough review of the disclosure of the invention. Exact figures can never be quoted simply because the process of prosecuting a patent application can take many turns and therefore the steps which the applicant must take to obtain a patent cannot accurately be predicted. In the following discussion, estimates have been given for each of the main steps in patent prosecution - the procedure for obtaining a patent.

However, it should be understood that these are only estimates and relate to typical cases which are processed through a typical routine prosecution and do not get involved in interference proceedings, appeals, or other unusual procedures.

## **Patenting Procedure**

### **1. Initial Conference and Patentability Search**

The first step in the patenting process is the preparation of a written disclosure of the invention. This written disclosure commonly includes one or more sketches or drawings of the invention. At the initial conference between the inventor and attorney, the attorney reviews the invention disclosure to determine whether the invention is proper subject matter for obtaining a patent. Further, the attorney discusses the invention with the

inventor to ensure that the attorney properly understands the invention and the particular features which the inventor believes to be novel. At that time, the attorney may advise spending no more money and that no application be filed; or may recommend that a patentability search be performed to determine whether the invention is patentable or to assess the possible scope of the claims; or the attorney may recommend that an application be pursued immediately based on pending statutory bars or the inventor's knowledge of the state of the art of the technology. The cost of this initial conference including the study of the invention disclosure and opinion normally ranges from \$200 to \$1000.

Often, the attorney recommends that a limited novelty or patentability search be performed. Such a search includes the attorney preparing a request for a patentability search together with a written disclosure of the invention. The search request is then forwarded to an associate in Washington who searches the technical literature in the U. S. Patent and Trademark Office for prior patents and publications relating to the novel features of the invention. The associate then sends the closest prior patents and publications which he finds in the search to the attorney for assessment of patentability and claim coverage. As an alternative to using the services of an associate, the attorney can himself perform an on-line search for prior patents and publications.

The inventor may wish for the attorney to prepare a formal patentability opinion or may wish to review the references himself to determine the extent of novelty of the invention. Generally a reasonable patentability search can be performed for less than \$1000. A patentability opinion may be rendered by the attorney for an additional \$500 to \$750. The patentability search provides at least two advantages. First, it provides an indication of the patentability and the potential scope of claim coverage of the invention. Second, it allows the attorney to draft a better patent application by preparing claims which are more focused on the invention in view of the prior patents and publications located in the search.

A favorable patentability opinion based upon a patentability search is no guarantee, however, that the invention is patentable. The examiners at the Patent Office are very knowledgeable about the technology of the invention and each examining unit has its own collection of prior art patents and publications. The patentability opinion is based only on the prior art found in the search or otherwise known by or provided to the attorney, who may in fact not have possession of the most pertinent prior art. Thus, the patentability opinion should be viewed by the inventor only as supportive, and not determinative, of patentability. The inventor should not rely on the search as uncovering all prior art relevant to patentability.

Even when the inventor has extensive knowledge of the prior technology in the field of his invention, a novelty search is still advisable. First, it is impossible for the inventor to know all of the prior patents and published technology, since many patents and publications do

not reach the marketplace. Second, there are many “paper patents” on inventions which never reach the marketplace and therefore are not accessible to the inventor. A patentability search generally requires four to five weeks. Since the attorney is requesting that his associate perform services on the inventor's behalf, an advance retainer is required to ensure that the attorney can reimburse the associate performing the search immediately upon receiving an invoice for the search.

## 2. Preparation and Filing of the Patent Application

The cost of preparing and filing the patent application will vary depending upon the complexity of the invention. Even a moderately simple invention will cost at least \$5,000 because of the information required by the U. S. Patent and Trademark Office to be included in the patent application. The charge for preparing the patent application is in addition to the cost of the patentability search and opinion. Although the cost of a patent application may vary between \$5,000 and \$25,000 depending on the complexity of the technology, we have found that a typical patent application averages \$10,000 in attorney's fees.

Certain expenses are also incurred in addition to the attorney's fees. A filing fee must be paid to the Government and, often, patent drawings must be prepared to accompany the application. The base filing fee (which includes the basic filing fee, utility search fee, and utility examination fee required by the U. S. Patent and Trademark Office) is \$500 for a small entity (less than 500 employees); for large companies, the base filing fee is \$1000. Additional government filing fees of \$100 - \$5,000 may be incurred if considerably more claims are included in the application than are allowed for the base fee. Depending on the nature of the invention, patent drawings may be required. A sheet of patent drawings normally costs \$100 - \$150. Of course, the number of sheets of drawings will depend upon the complexity of the invention.

It is customary to ask for an advance prior to preparing the patent application. This advance is used to pay for the patent drawings and the Patent and Trademark Office filing fees. Any remainder is applied toward the legal fees incurred in writing the application. Any remaining charges for the preparation and filing of the application are then invoiced when the application is submitted to the inventor for execution prior to filing the application with the U. S. Patent and Trademark Office.

Normally, the preparation and filing of a patent application requires approximately three months after the patentability search and opinion have been performed. This is a typical period and the time required may be reduced if circumstances demand it.

The inventor can be of assistance in minimizing the cost of the preparation and filing of a patent application. In particular, the inventor can be most helpful by completely thinking through the invention and providing the most detailed disclosure of the invention possible to the attorney. Much of the time spent by the patent attorney includes gaining a thorough understanding of the invention and obtaining sufficient detail to properly prepare the application in accordance with the rules and regulations of the U. S. Patent and Trademark Office. When the patent attorney must “engineer” the invention, or continuously encourage the inventor to provide additional technical information, or when the inventor adds additional disclosure after the application has been prepared, the cost of the patent application increases dramatically. Once the application has been drafted, it can be very expensive to rewrite the application to include additional disclosure or make extensive changes in the description of the invention. Although the inventor may have access to his own facilities, equipment, or personnel to assist in the drafting of the patent drawings, this normally is not recommended since it requires that the patent attorney spend time teaching the inventor or the inventor’s personnel the specifications required for patent drawings by the U.S. Patent and Trademark Office.

The statutes and regulations of the U. S. Patent and Trademark Office require that the inventor and patent owner disclose to the Patent and Trademark Office the closest prior patents and publications relating to the invention and known to the inventor and patent owner. The U. S. Patent and Trademark Office encourages that an Information Disclosure Statement be filed with the Patent and Trademark Office within three months after the patent application has been filed. This Information Disclosure Statement may include a short description of each of these prior patents and publications. Such an Information Disclosure Statement will vary in cost depending upon the number of prior patents and publications to be reviewed by the patent attorney for inclusion in the Information Disclosure Statement. Typically, an Information Disclosure Statement will cost in the range of \$500 to \$2,000.

### 3. Prosecution of the Application Before the U. S. Patent and Trademark Office

Once the application has been filed with the U. S. Patent and Trademark Office, it is sent to a particular group of examiners who examine all inventions in a given technology. Thus, the examiners are familiar with the general technology of the invention. Typically, the application does not reach the patent examiner for six months after the application has been filed. Once the examiner receives the application, he reviews the application and particularly studies the claims. The examiner then performs a patentability search by reviewing the prior patents and publications which are located in the technical library of the Patent and Trademark Office. Once the examiner completes this search, he prepares a critique of the application called an “office action”. In this critique or office action, the examiner lists the prior patents and publications located during his patentability search and may raise certain objections to the application. These objections may be to the formalities of the application such as the description or drawings, but most often relate to a rejection of the claims. Frequently, all of the claims in the patent application are rejected

based on the results of the patentability search performed by the examiner. The inventor should not be alarmed when all claims are rejected. It is important that the patent attorney prepare the initial claims as broadly as possible to ensure that the inventor receives the broadest claims possible. It is expected that these claims may be amended, i.e., narrowed, after the examiner has performed his search and rendered his opinion concerning the patentability of the claims. Often, this first office action is not received by the inventor and his attorney until about 12 to 18 months after the application has been filed.

Once the attorney receives the office action, accompanied by copies of the prior patents and publications located by the examiner, the attorney studies the office action and prior patents and publications in order to prepare a response. It is not unusual that the examiner's patentability search, which is supposed to be most exhaustive, may locate more relevant prior patents and publications than those found in the more limited patentability search.

Although it is possible to abandon the patent application at this point in the prosecution because of the office action, normally the decision is made to respond to the office action by amending the application in order to place it in better form for the issuance of a patent. The response to the office action normally includes amending the application and particularly the claims to distinguish them from the prior patents and publications cited by the examiner in the office action. The response also includes a discussion of the differences between the invention and the prior publications and patents located by the examiner. Often, the attorney includes legal arguments as to why the particular claims, as amended, should be allowed by the examiner. The cost of responding to an office action typically costs in the range of \$2,000 to \$3,500 and most often averages \$2,500. Since the office action is normally received approximately one year after the application has been filed and the attorney is given three months to respond to the office action without incurring extension fees, the expense of responding to the office action is not incurred until approximately 15 months after the application is filed.

The filing fee paid at the time of the filing of the application ensures that the applicant will receive two office actions from the examiner at the U. S. Patent and Trademark Office. Thus, if the application and claims are not placed in allowable form in the response filed after the first office action, the applicant is entitled to a second office action. Normally the second office action is a "final" office action, meaning that a response to the final office action must place the application in condition for the allowance and issuance of the patent or the application will become abandoned unless the inventor files an appeal or a continuation application. A continuation application requires an additional filing fee and entitles the inventor to two additional office actions. A response to the final office action may also cost in the range of \$2,000 to \$5,000 and typically averages about \$3,000. It should also be appreciated that additional fees may be required by the U. S. Patent and Trademark Office such as additional claim fees, recording fees, and extension fees. The charges for the prosecution of a patent application are billed as the work is performed. If the application is finally rejected by the U. S. Patent and Trademark Office

an appeal may be taken. However, only a small percentage of applications proceed through the complete appeal process. The appeal process may be quite lengthy and expensive, and is relatively complex. For these reasons, that process is beyond the scope of this memorandum.

## Issue Fees and Maintenance Fees

Once the examiner is satisfied that the claims have been properly drafted and distinguish the prior art, he will allow the application and issue a document called "Notice of Allowance and Issue Fee Due". On receiving the notice of allowance, the inventor must pay an issue fee to the U. S. Patent and Trademark Office which in turn sends the application to the printer for publication. Normally, the U. S. Patent and Trademark Office issues a patent five to eight months after the issue fee is paid. The issue fee for small entities is \$700. For large companies, the issue fee is \$1,400. The inventor may also have to pay a pre-grant patent application publication fee of \$300.00 in addition to the issue fee.

### Summary Table of Sample Fees

<b>Attorney's Services</b>	<b>Low*</b>	<b>High**</b>	<b>Typical</b>
Disclosure conference	\$ 200	\$1,000	\$ 400
Patentability search	1000	1,500	1750
Preparation of Application	5,000	25,000	10,000
Information Disclosure Statement	500	2,000	1000
Prosecution of Application after filing	2000	15,000	10,000
Issuance	400	1000	750
<b>TOTAL</b>	<b>\$9,100</b>	<b>\$45,5000</b>	<b>\$23,900</b>
<b>Expenses</b>	<b>Low*</b>	<b>High**</b>	<b>Typical</b>
Patent drawings	\$ 200	\$1,500	\$500
PTO filing fee	500	1,000	1,000
Additional prosecution fees	0	1,500	750
Issue fee	700	1,400	1,400
Publication fee	300	300	300
<b>TOTAL</b>	<b>\$1,700</b>	<b>\$5,700</b>	<b>\$3,950</b>

The above sets forth a range of costs for obtaining a patent. A routine patent application on the average will cost approximately \$24,000 in fees and \$4000 in expenses over a period of 2-1/2 years.

The inventor should also be aware that after a patent issues, the U. S. Patent and Trademark Office requires that certain maintenance fees be paid to keep the patent in force. Those fees are currently due 3-1/2, 7-1/2, and 11-1/2 years after the patent has issued and are currently \$900, \$2,300 and \$3,800, respectively for large companies, and half of these prices for small entities.

## **Term**

The issuance of a patent grants to the patentee a monopoly on that invention that extends for the life of the patent. That is, the patentee has the exclusive right to prevent others from making, using, selling, offering to sell, and importing the patented invention. It is this right that can be exploited commercially. Before the law changed on June 8, 1995, patents had a life of seventeen years from their issue date, provided the three maintenance fees were timely paid. Patents issuing on applications filed after June 8, 1995 will also require maintenance fees, but will have a term of twenty years from their filing date. Because the average time that elapses between disclosure of the invention to the attorney and the issuance of the patent is approximately three years, the change described above is not likely to significantly affect the average patent term.

## **Provisional Applications**

U.S. law has been changed to allow the filing of provisional applications. The purpose of the provisional application is to enable the inventor to obtain a filing date without having to incur the expense of preparing and filing a full-fledged patent application up front. It is important to have an early filing date, as the filing date determines the extent of "prior art" that can be cited against the patent application. Provisional applications are not examined and are not subject to the same rigorous standards of content and form as regular applications, except that they must contain a complete and enabling description of the invention. No patent can issue on a provisional application, but a subsequent non-provisional application may claim the provisional's earlier filing date if it relies on information disclosed in the provisional.

If an inventor opts to file a provisional application, a standard patent application must be filed within one year of the filing of the provisional application, or the filing date will be lost. If the inventor intends to file any foreign patent applications, they too must be filed within one year of the filing date of the provisional application. The provisional application

effectively reserves an earlier filing date, while allowing the inventor to postpone the cost of the patent application for one year.

The filing fee for provisional applications is \$100 for individual inventors and other small entities, and \$200 for large corporations.

### **Pre-Grant Publication of Patent Applications**

According to current Patent Office rules, any U.S. non-provisional utility patent application filed on or after November 29, 2000 will be published 18 months after the earliest effective priority date. The U.S. patent application will be published even if the U.S. patent application is still pending (i.e., before the patent issues). The publication of a U.S. patent application can be prevented if there is no intent to file the U.S. patent application in any foreign countries (or under the auspices of the Patent Cooperation Treaty), and if an appropriate statement regarding such intent is filed at the time the U.S. patent application is filed.

In some instances, however, it may be advantageous to allow the application to publish, even if foreign patent rights are not going to be pursued. The publication of a patent application prior to the issuance of the patent allows the opportunity for the patent holder to claim pre-grant reasonable royalties. Pre-grant reasonable royalties are royalties for infringement that took place after the patent application was published but prior to issuance of the patent. Pre-grant reasonable royalties may be claimed if at least some of the claims in the published application and the issued patent are substantially identical. Pre-grant reasonable royalties, however, may only be awarded if the infringer is given notice of the published application.

Provisional applications, design applications and reissue applications are not published by the Patent Office.

### **Foreign Protection**

This memorandum is directed primarily to protection under U.S. law and is not intended to provide any detailed discussion of foreign patent protection. A U. S. Patent only protects the invention within the United States and provides no protection in foreign countries.

Thus, foreign patent protection requires the filing and prosecution of a patent application in each foreign country. Such protection is beyond the scope of this memorandum. We would, however, be happy to provide information concerning the cost of obtaining patent protection in particular foreign countries. Please also be advised that there are certain patent treaties which may be of assistance in providing foreign patent protection.

Most foreign industrialized countries are members of the Paris Convention. Under this Convention, an inventor can file his patent application in a member foreign country up to one year after the filing of his U. S. patent application (provisional, if any, or regular) and still obtain the U. S. filing date for his foreign patent application. Thus, normally, where

patent protection is only sought in industrialized countries, the filing of foreign patent applications is addressed during the one-year period after the filing of a U. S. application.

### **Additional Points of Patent Law**

A patent cannot be infringed until after it has issued. Our patent laws provide no remedies against competitors during the pendency of the patent application. This is understandable because all patent applications are held confidential in the U. S. Patent and Trademark Office. Therefore, not only do potential competitors not have knowledge of the application but, until the claims have been allowed by the U. S. Patent and Trademark Office, there is no legal definition of the invention by which to govern the competitors' activities.

Many inventors place the words "Patent Pending" on their products during the pendency of the application. This places competitors on notice that a patent application has been filed and that they run the risk of losing the cost of their capital investment by producing and selling a potentially infringing product. The Patent Pending designation alerts the competitor that upon the issuance of the patent, he may well have to stop the production of the potentially infringing product, and he may be unable to recover the expense of gearing up for production.

No United States Patent can validly issue on an invention if, more than one year before the filing of the application for patent, the invention was disclosed in a printed publication in any country, or was on sale or in non-experimental public use or commercial use in the United States. Thus, the inventor is prohibited from filing a patent application on his invention if he has waited too long, i.e., beyond this one-year statutory period. Therefore, care should be taken to assure that this one-year grace period does not expire before the U. S. application is filed. Any public or commercial use of the invention should be disclosed to the attorney immediately at the initial conference concerning the filing of a patent application. If the applicant has waited too long, there is no reason to pursue a patent application further.

Most foreign countries do not recognize this one-year grace period. Therefore, most foreign countries require that an application be filed before the first publication or sale of the invention anywhere in the world. Therefore, if foreign patent protection is to be sought, the U. S. patent application should be filed prior to the first publication or sale anywhere, and the inventor should not rely on the one-year grace period in the United States since that does not save his foreign patent rights.

If there has been any disclosure in a publication, any offer to sell or sale of the invention, or any public disclosure or commercial use of the invention, the complete circumstances should be disclosed to the attorney along with the disclosure of the invention. Failure of the inventor to advise the U. S. Patent and Trademark Office of such matters may well result in any issued patent being invalid and unenforceable. The inventor is obligated to

make such disclosures, together with any known prior patents and publications, to the U. S. Patent and Trademark Office during the prosecution of the application.

## **Conclusion**

This memorandum has been written to provide you with basic information on pursuing patent protection in the United States. This memorandum is not all-inclusive and is intended to provide you with only a fundamental understanding of the prosecution process. This memorandum is not intended to be a substitute for a thorough conference with the patent attorney to ensure that you have all the information required to make proper decisions concerning your pursuit of patent protection. We hope this memorandum has been of help.