Patent Application Preparation and Prosecution:
How Does It All Work?

For those who have never been through the patenting process before, it can be a daunting and confusing process to embark on, with many unknowns along the way. A lack of understanding of the process on the front end can lead to unwelcome surprises down the road, and ultimately a feeling of dissatisfaction with the process and possibly the people involved in assisting you. In addition, it is a relatively expensive process and one for which is very difficult to provide an accurate estimate, it is a relatively expensive process and one for which is very difficult to provide an accurate estimate. So, for anyone considering patent protection, an overview as there are many variables throughout. So, for anyone considering patent protection, an overview as there are many variables throughout. So, for anyone considering patent protection, an overview as there are many variables throughout.

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As explained in the Jan./Feb. 2009 HTP issue, a U.S. patent is an exclusionary property right granted by the United States Patent and Trademark Office (USPTO). To have the right granted, an application for patent must be filed and examined, and a determination made by a USPTO Examiner that the claims of the application are patentable and, thus, entitled to that exclusionary right. The application must be filed in the U.S. in the name of the inventors of the claimed subject matter. However, many inventions are made in the course of employment and subject to an obligation to assign the invention to the employer, in which case the employer has the right to pursue, or not pursue, the invention at their expense and with the cooperation of the employee inventors. Whether or not the invention is to be assigned, the first step is to contact a reputable registered patent practitioner (often referred to as a patent prosecutor) to discuss the option of filing an application for patent. A registered patent practitioner is an individual who has received a registration to represent inventors before the USPTO. To receive a registration, the individual must meet certain technical qualifications, such as an engineering or soft science degree, and the individual must take and pass a test administered by the USPTO on patent practice and procedure. If the individual that passes the test has a law degree, he/she is a patent attorney; if no law degree, a patent agent. Either way, a registered patent practitioner has at least a basic level of technical skill considered necessary to work with inventors to understand the details of their invention, and they have an understanding of the examination process and USPTO procedures. It is true that inventors may represent themselves pro se, but this is highly not recommended. Patent application preparation and prosecution is simply too complex to navigate without the assistance of an experienced and knowledgeable representative.

Deciding to File: What’s Next?

There are a number of factors that go into the decision of whether to file for a patent, but assuming the decision is made to proceed, the application preparation phase of the process in initiated. The inventors typically provide an invention disclosure detailing the invention for the representative’s review.

Depending on how comprehensive the disclosure is, the representative may need to have one or more discussions with the inventor to flesh out additional details, bearing in mind that a patent application must include a full written description of the invention and must enable one skilled in the applicable art to make and use the invention, as well as to disclose the best mode known to the inventors of practicing the invention. If deemed necessary for an understanding of the invention, drawings are required. Some applications require no drawings, such as perhaps an application on an alloy composition, while others require extensive drawings, such as an application on complex machinery. Providing a “bare-bones” disclosure may increase the cost of preparing the application. This is due to the need to develop the necessary detail for both the written description and drawings, so inventors should bear in mind that the quality of their initial invention disclosure affects the cost of preparing the application for filing. Further, certain information must be disclosed regarding the best mode, such that if the inventors and/or assignee are unwilling to disclose that information, maintaining the invention as a trade secret may be more appropriate than applying for a patent.

The claims of the application define the exclusionary right, therefore careful consideration should be put into crafting the claims. They should be broad enough to cover the essential elements of the invention without including unnecessary limitations, while also not being so broad as to read on the prior art, i.e., what has been done before. Good communication between the inventors, the employer, and the representative...
will help ensure the best possible claim scope. It bears mentioning that there are very specific rules about claim drafting that often make the claims read in a manner that is rather awkward and different from normal speech and writing patterns. Do not hesitate to discuss the meaning of the claims with your representative if you don’t understand, and don’t be offended if your suggestions about claim language are not adopted verbatim. Once prepared, the application must be reviewed by the inventors for accuracy. When the application is finalized, the inventors must sign an oath or declaration stating that they believe they are the first and true inventors of the claimed subject matter and that they read and understood the application. If the invention must be assigned to another, the assignment is typically executed concurrently with the oath or declaration. The application is then filed with the USPTO and assigned a filing date, thus commencing the application prosecution phase. If a patent is granted, the term of the patent is 20 years from that filing date.

**USTPO Procedure**

The USPTO initially reviews the application for compliance with certain formalities. The Applicant’s representative is notified of any non-compliance. Some matters may be resolved by further submission without losing the initial filing date; for example, the signed declaration may be filed later, but a surcharge must be paid. Other omissions will result in the filing date being that of the date of curing the omission. For example, a missing drawing sheet where the drawing is deemed necessary will result in the filing date being the date that the missing drawing is filed.

Once the formalities are complied with, the application is assigned to a Technology Center based on the subject matter of the application and placed on the docket of an Examiner within that Technology group. Examination is a first in, first out procedure; the application “waits in line” until its turn. This could be months or years. If a first action is issued by the USPTO later than 14 months from the filing date, it is considered an examination delay, which could result in an adjustment of the patent term beyond the 20-year period.

The Examiner first reviews the claims to determine if more than one invention is being claimed in the application; for example, an alloy composition and a method of making an alloy. If there are multiple inventions, the Examiner issues a Restriction Requirement, which can be set forth in a written Office Action. The Applicant must respond in writing with an election of one invention to be examined on the merits, and if warranted, may further include arguments traversing of the restriction on the grounds that it is not proper. Alternatively, the Restriction Requirement may be set forth verbally to Applicant’s representative in a courtesy telephone call from the Examiner with an opportunity for a verbal election to be made, typically within a very short time frame. Under some circumstances, the non-elected claims may be later examined in the same application, but more often must be re-filed in a Divisional Application.

The Examiner then conducts a computer search of the prior art directed to the subject matter of the single invention, which is set forth in one or more numbered claims. The most relevant art is compared to the claims on a claim-by-claim basis to determine whether the claimed subject matter lacks novelty over one or more prior art references, and/or would be obvious to one of ordinary skill in the art in view of one or a combination of prior art references. The Examiner also reviews the application and claims for compliance with the written description, enablement, and best mode requirements, as well as the specific rules mentioned above regarding proper claim language. Claims either are independent, or, if they refer back to another claim (e.g., “The method of claim 1, wherein…”) and add a further limitation thereto, are dependent. The Examiner issues an Office Action on the merits addressing each claim.

If the Examiner finds that all claims are entitled to patent protection, the Office Action is a Notice of Allowance. Otherwise, the Office Action sets forth the rejections of the claims together with the Examiner’s reasoning. If any claims are not rejected over the prior art, they are indicated as being allowed or objected to on the basis that they depend from a rejected claim, but would be allowed if rewritten in independent form. The Applicant has three months to respond without charge, or up to three additional months may be obtained with a petition and payment of an extension of time fee, which is exponentially more expensive for each additional month. If no response is filed within six months, the application is abandoned.

The Office Action may include a single rejection over a single reference, or it may include multiple rejections over multiple references. The Applicant’s response must address each rejection; the more rejections there are, the more expensive it becomes to prepare the response to the Office Action. This is one reason why it is very difficult to estimate the cost of prosecuting an application, since the patent prosecutor cannot know for certain whether the Examiner will issue a first action Notice of Allowance or an Office Action with numerous rejections over numerous references. Further, once a response to the initial Office Action is filed, the Examiner may issue additional Office Actions. So, prosecution may be quick and relatively inexpensive, or can be an expensive, prolonged process involving numerous Office Actions and responses. In some instances, when a favorable outcome cannot be obtained via Examination with the assigned Examiner, the Applicant may choose to pursue an Appeal to the USPTO’s Board of Appeals. This process adds more expense to the process.

The response to the Examiner’s rejections may include amendments to the claims, typically narrowing their scope, and/or arguments against the rejections. Patent prosecution is one area where “everything you say and do can and will be used against you in a court of law.” If a patent is granted, and the patentee subsequently attempts to enforce the patent against an accused infringer by filing a patent infringement lawsuit, the defendant will most certainly turn to the patent prosecution history to look for ways to use the Applicants statement’s and amendments as a basis to assert non-infringement, invalidity, and/or unenforceability for inequitable conduct. Thus, just as the claims must be carefully crafted during application preparation, so too must the amendments to the claims and the arguments pertaining to the claims during prosecution. Without the assistance of a reputable, experienced patent prosecutor to carefully craft these responses, any patent you obtain may not be worth the paper it is printed on.
Proceeding or Not

At any point during prosecution of the application, the Applicant can choose to abandon the application. In some instances, the patent prosecutor will advise that in their opinion, protection is unlikely to be obtained. In other instances, the scope of the claims may need to be narrowed to define over the prior art that has been cited to the point that the allowable claims would be too narrow to be useful. In other instances, what was once believed to be a promising invention when filed has since been determined to be of little to no value commercially. There are other reasons to abandon an application, but once Examination has commenced, the investment to that point cannot be recouped. However, a partial refund of government fees may be obtained if the application is expressly abandoned in writing prior to commencement of examination.

Whether it happens on the first Action or after a long battle, a percentage of applications receive a Notice of Allowance. A three month period is then set to pay an issue fee to proceed to issuance of the Letters Patent. The issue fee should be considered another foreseeable expense in the patenting process. Before the issue date, any desired Divisional applications for non-elected inventions must be filed to claim the benefit of the filing date of the original application, such that Restriction Requirements that lead to non-elected inventions may present yet another expense if the Applicant wants to pursue each non-elected invention. Any adjustments to the 20-year term of the patent will also be indicated at the time of Allowance and again at Issuance. Any prosecution delays by the Applicant (e.g., extensions of time) will be subtracted from any examination delays by the Examiner, and if the resulting number of days is in Applicant's favor, the resulting number of days of examination delay will be added to the patent term.

After issuance, three periodic maintenance fees must be paid to keep the patent from prematurely expiring. The fees are due 4, 8, and 12 years after issuance, and each fee increases exponentially, such that it is relatively inexpensive to maintain the patent from the 4th to 8th year, and very costly to maintain the patent from the 12th year to the end of the 20-year term. Thus, the patentee may forgo payment of a maintenance fee, and the patent will expire earlier than the full 20-year term.

The above is a quick synopsis of the process of preparation and prosecution of patent applications. However, it only scratches the surface of the complexity of the world of patents. The most important points to take away from this synopsis are: (1) the patenting process can be long and expensive (you should be extremely wary of anyone who tells you otherwise, because there are scam artists who prey on the unenlightened); and (2) the patenting process is extremely complex and should not be pursued without the assistance of a reputable, experienced patent prosecutor. However, competent preparation and prosecution of a patent application can lead to a very useful and lucrative intellectual property right.