Startup Law Clinic
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PATENT PROSECUTION

This white paper briefly explains what a patent is, considerations to take into account when deciding whether patent protection is right for you, and how to get a patent.

What is a Patent?[1]

A patent gives a patent owner the right to stop (also called "exclude") others from making, using, selling, or offering to sell the patent owner's patented invention within the United States. Patents protect processes, machines, manufacture, or compositions of matter, or improvements on such things, so long as those inventions are **useful, new, and nonobvious**. The right to exclude starts on the date a patent is **issued** and ends twenty years after the date the patent was **filed** with the United States Patent and Trademark Office ("USPTO"). In exchange for the patent, the inventor must disclose (through the patent application) the invention, how it works, and how it can be made.

The process of obtaining a patent is called "patent prosecution." This is typically a long and expensive process through which the USPTO examines a patent application to determine if the invention meets patentability requirements (discussed further below). Before you begin this process, you should pause and think about whether it is worthwhile to pursue a patent for your invention.

Is Pursuing a Patent Worthwhile?

Obtaining a patent can cost anywhere from several thousands of dollars to tens of thousands of dollars. The costs depends on the complexity of the invention, and whether you get help from a patent attorney.[2] There are also fees you must pay after you are granted a patent in order to maintain it, which range from several hundred to several thousand dollars.[3]

Other factors to consider include:

- Is there a market for your invention? If not, your patent may be useless.
- Is your invention in a fast-paced technological field? If yes, your invention could be out of date by the time your patent is issued (prosecution averages two years[4]).

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[1] This white paper focuses on United States utility patents. Other countries may or may not have similar patent systems. The United States also offers design patents and plant patents.

[2] Inventors can file their own provisional and nonprovisional patent applications with the USPTO. The USPTO offers a pilot program to assist such applicants. *Pro Se Assistance Program*, USPTO, https://www.uspto.gov/patents-getting-started/using-legal-services/pro-se-assistance-program (last visited Dec. 17, 2019). However, this program does not provide legal advice. We strongly advise applicants to seek help from registered patent attorneys or agents to get the best protection for an invention.

[3] *USPTO Fee Schedule*, USPTO, https://www.uspto.gov/learning-and-resources/fees-and-payment/uspto-fee-schedule (last visited Dec. 18, 2019) [hereinafter *Fee Schedule*].

[4] *November 2019 Patents Data, at a Glance*, USPTO, https://www.uspto.gov/dashboards/patents/main.dashxml (last visited Dec. 17, 2019).

- How easy is it to "design around" your invention? Your patent might offer only thin protection if competitors can easily bypass your patent.
- Is the invention something that can be concealed from customers and competitors (for example, the process for making Coke drinks)? If so, trade secret protection, which lasts as long as the information remains a trade secret, may be a better option than patent protection.

Which Inventions are Patentable?

Patents are only available for inventions that are **useful, novel, and nonobvious**. Proving that an invention is useful is generally a low bar to patentability. The more substantial issues are novelty and nonobviousness. USPTO examiners will evaluate whether your invention is novel and nonobvious compared to all inventions that were available to the public before the patent application's filing date (called "prior art"). Examiners look for prior art in patents, published documents, videos, and products.

Novelty
A novel invention is one that is totally new. It is not found in any single prior art reference. However, when a single prior art reference contains every characteristic of an allegedly new invention, the allegedly new invention is "anticipated" and therefore is not patentable. For example, if your invention includes components "A+B+C+D" and prior art reference #1 is "A+B+C+D", your invention is anticipated by prior art reference #1 and you cannot patent your invention. However, if prior art reference #1 only has components "A+B+C" and prior art reference #2 has only component "D", then your invention is novel because none of the prior art completely anticipates your invention.

Nonobviousness
Nonobviousness is more nuanced than novelty. A nonobvious invention is one that would **not** have been obvious to a person having ordinary skill in the art ("PHOSITA") who knew of all the prior art. A PHOSITA is a legal standard created to help determine whether an invention is obvious. The PHOSITA has the normal skill and knowledge of a person in the invention's technical field but is not a genius. The invention in the second scenario in the *Novelty* section above could be considered obvious if a PHOSITA would have known to combine references #1 and #2 as a result of their reasonable skill and knowledge. An obvious invention, even if it is technically novel, is unpatentable.

Surveying the Patent Field

A preliminary survey, sometimes called a Freedom to Operate search ("FTO"), of the technology surrounding your invention can be helpful in determining if your invention meets the patentability requirements. **FTO searches find prior art that may show your invention is anticipated or obvious and may help you understand potential limits to your patent's scope**.

You can do an FTO yourself or pay professionals. Attorneys have resources to perform a more comprehensive FTO than individuals. You should seriously consider a professional FTO before beginning patent prosecution.

If you are performing your own FTO, a good place to start is to brainstorm key terms that describe your invention. The key terms could include physical components of your invention, materials used, verbs that describe how your invention works or is made, or any other key descriptors of your invention. You should also include synonyms for your key terms to broaden your search. You can then run a Google search using your key terms. Running a Google search first helps you understand the technological space, figure out key players and potential problem products, if there are any, and find other key terms that you may want to use in your search. After your Google search you can run your key terms through a patent database. For example, Google Patents is a free and easy to use patent database.[5] After you have found a few relevant patents, it is useful to look at the classifications of those patents to further narrow your search.

Performing an FTO yourself or paying a professional to do it is useful to identify potential prior art, but the USPTO ultimately decides whether to grant or deny your patent application. Therefore, an FTO should be used to evaluate the risk that your patent application will be denied, which in turn will factor into whether pursuing a patent is worthwhile.

How to Get a Patent

There are two ways to start patent prosecution—a provisional patent application or a nonprovisional patent application. Provisional applications are placeholder patent applications for your eventual nonprovisional application. Nonprovisional applications are the full-fledged applications that can turn into a granted patent.

Provisional Patent Applications

Provisional applications are a great starting point because the USPTO does not examine them, and they do not have the formal requirements of nonprovisional applications. This makes provisionals a relatively cheap and simple way to begin the prosecution process. Once you submit a provisional application, you have one year to file a corresponding nonprovisional application. In that year you can perfect your invention and determine if there is a market for your invention. If you decide in that year that getting a patent is not right for you, it would not be as big of a loss as if you started with an expensive nonprovisional.[6]

Provisionals are useful because they allow a corresponding nonprovisional application to claim the provisional application's filing date as its own effective filing date. **That means that if you file your provisional application on April 30, 2020, and then file your nonprovisional application on April 2, 2021, the effective filing date of the nonprovisional application will**

[5] Google Patents is a separate search than the general Google web search results.

[6] *Fee Schedule*, *supra* note 2. The provisional filing fee is $280 unless the applicant qualifies as a small entity ($140) or micro-entity ($70). A nonprovisional requires a filing fee, search fee, and examination fee totaling $1,720 or $860 for small entities, and $430 for micro-entities.

be April 30, 2020. This is important because the US patent system is a first-inventor-to-file system so whoever has an earlier effective filing date wins priority if there is a dispute about who gets the right to a patented invention.

Perhaps most importantly, the provisional application protects you from forfeiting your right to patent your invention once you publicly disclose your invention or begin selling/licensing it (whether or not publicly). In the US, you forfeit your right to patent an invention once that invention has been in the public (either through a disclosure or through a sale/license) for a year. By filing a provisional application within that year time period, you reserve your right to patent the invention. **Keep in mind that in most countries in the world, you forfeit your right to patent an invention as soon as you publicly disclose or sell/license it**. So if you are considering patenting your invention, you should file a provisional application (or a nonprovisional) before you publicly disclose the invention or begin selling/licensing it.

A provisional application must include at least a written description of the invention such that a PHOSITA could make and use the invention and recognize the invention in the corresponding nonprovisional. **The corresponding nonprovisional that you eventually file will only be able to claim the provisional's filing date if the invention described in the nonprovisional application falls within the scope of the invention disclosed in the provisional application**. Provisional applications should therefore describe the invention in as much detail as possible to be useful. Drawings are only required if necessary for PHOSITA to understand the invention but are highly recommended to better describe your invention. Although you can file your own provisional application, getting help from a patent attorney or agent is very helpful to make sure your provisional application is not too narrow.

Nonprovisional Patent Applications

There are many formalities required to file a nonprovisional application.[7] This makes them much more expensive and difficult to file than provisional applications. The most important formality of a nonprovisional application is the patent claim. Claims define the scope of your invention and, therefore, your patent rights. While you could try to file a nonprovisional application yourself, we highly recommended that you get help from a patent attorney or agent to handle the formalities and to get the best possible claims.

Once your nonprovisional application is filed, a USPTO examiner will examine your application to determine if your invention meets the patentability requirements and to ensure all formalities are met. The examiner will most likely issue a non-final office action ("OA") which may identify prior art that shows your invention is anticipated or obvious or any problems with formalities. You will then have six months to respond to the OA by amending your application to comply with formalities, amending your claims to overcome prior art, or arguing that your invention is not anticipated or obvious. If the examiner is satisfied by your response, the examiner may issue

[7] This brief white paper will not go into the detailed formalities of a nonprovisional but they can be found at *Nonprovisional (Utility) Patent Application Filing Guide*, USPTO, https://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/nonprovisional-utility-patent (last visited Dec. 18. 2019).

a notice of allowance, which signifies that your patent will issue upon your payment of the issuance fee.

If the examiner is not satisfied by your response, the examiner may issue a "final" OA that rejects your patent application. A final OA is not the end of the road for your patent. There are several ways to respond:

- File an After-Final Response that amends your application to comply with the final OA. The claim amendment must be minimal for the examiner to accept the After-Final Response. If this response does not work, patent prosecution ends unless you file a Request for Continued Examination ("RCE").
- File an RCE. This is useful if your amendment is substantial or your After-Final Response failed. RCEs continue the prosecution. There is a substantial RCE filing fee which increases for subsequent RCEs.
- If your application has been rejected twice, you can file an appeal with the Patent Trial and Appeal Board. A full appeal can cost thousands to tens of thousands of dollars. There is no guarantee the rejection will be overturned.
- Abandon the application.

This back-and-forth with OAs, responses, and then filing RCEs to keep prosecution going continues until the examiner is convinced to grant a patent or you decide to abandon the application. If you are fortunate to receive a notice of allowance, you then pay an issue fee, receive your patent, and pay maintenance fees at 3.5, 7.5, and 11.5 years after your patent is issued.

Taking an invention through patent prosecution is a complex process. Getting help from a patent attorney or agent is strongly recommended. The Startup Law Clinic can refer you to a patent attorney or agent.