

COURSE 16, TUTORIAL 1

THE U.S. PATENT APPLICATION PROCESS

Patents are one of four types of intellectual property (IP) – the others being trade secrets or know-how, trademarks, and copyrights. This tutorial will focus on patents and the process for securing a patent in the U.S. First, let's consider why we have a patent system? This system was established to promote innovation. In exchange for publishing detailed information about an invention, a patent owner has the right to exclude others from using that invention for the life of the patent. However, innovation can occur by others reading and learning from the patent's teachings. Since the first patent in 1790, over 9.75 million patents have been awarded for inventions by the U.S. Patent and Trademark Office (USPTO). The vast majority of these, estimated at greater than 95%, are improvement patents that build on past inventions. Only a select few are pioneering patents that introduce new ideas such as the laser, transistor, or a new class of drugs.

CRITERIA FOR PATENTABILITY

How does one know if an invention is patentable? Per the Committee Reports that accompanied the 1952 Patent Act and the Chakrabarty Supreme Court ruling “anything under the sun made by man” is eligible for patent consideration. However, there are three key criteria that must be met: **Novelty, Usefulness, and Nonobviousness.**

Novelty considers what is known and used by others – a so-called “prior art” barrier. If an invention has been described in writing in a patent or other printed publication, it is NOT considered novel. If an invention has NOT been kept confidential before the patent application, it is also NOT considered novel.

The second criterion for patentability is **usefulness** which excludes abstract ideas, as it must be capable of use and provide an identifiable benefit.

The third criterion – **Nonobviousness** – is somewhat more complex. If one publication teaches part of an invention and another or multiple documents teach the remainder, the invention may be deemed obvious. The key question here is would a person of ordinary skill in the art be motivated to combine the referenced inventions with likelihood of success. The nonobvious criteria are more subjective. Often in patent parlance the concept of an “inventive step” not taught by previous references is used to highlight the nonobvious nature of the invention.

PATENT CATEGORIES

There are three patent categories: **plant patents, design patents, and utility patents.** Plant patents represent less than 1% of issued patents, design patents less than 10%, with the remainder – about 90% – being utility patents. A plant patent protects a distinct and new type of plant. Examples include hybrid fruit trees and herbicide-resistant crops. Assuming a plant patent issues, its patent life is 20 years from application filing.

A design patent protects the visual or ornamental design of a product. An example of this is a patent assigned to Apple (USP D618677) covering a black rounded rectangle design for their iPhone. If an ornamental design has utility as well, a separate utility patent must also be filed. A new design patent life is 15 years from application filing, assuming that it issues.

A utility patent protects a new or improved process, machine, article of manufacture, or composition of matter. A new utility patent has a life of 20 years from application filing, assuming it issues and all subsequent maintenance fees are paid.

Under the utility patent process, a special type of application known as a **provisional patent application** is allowed. This will be explored in more depth later in this course.

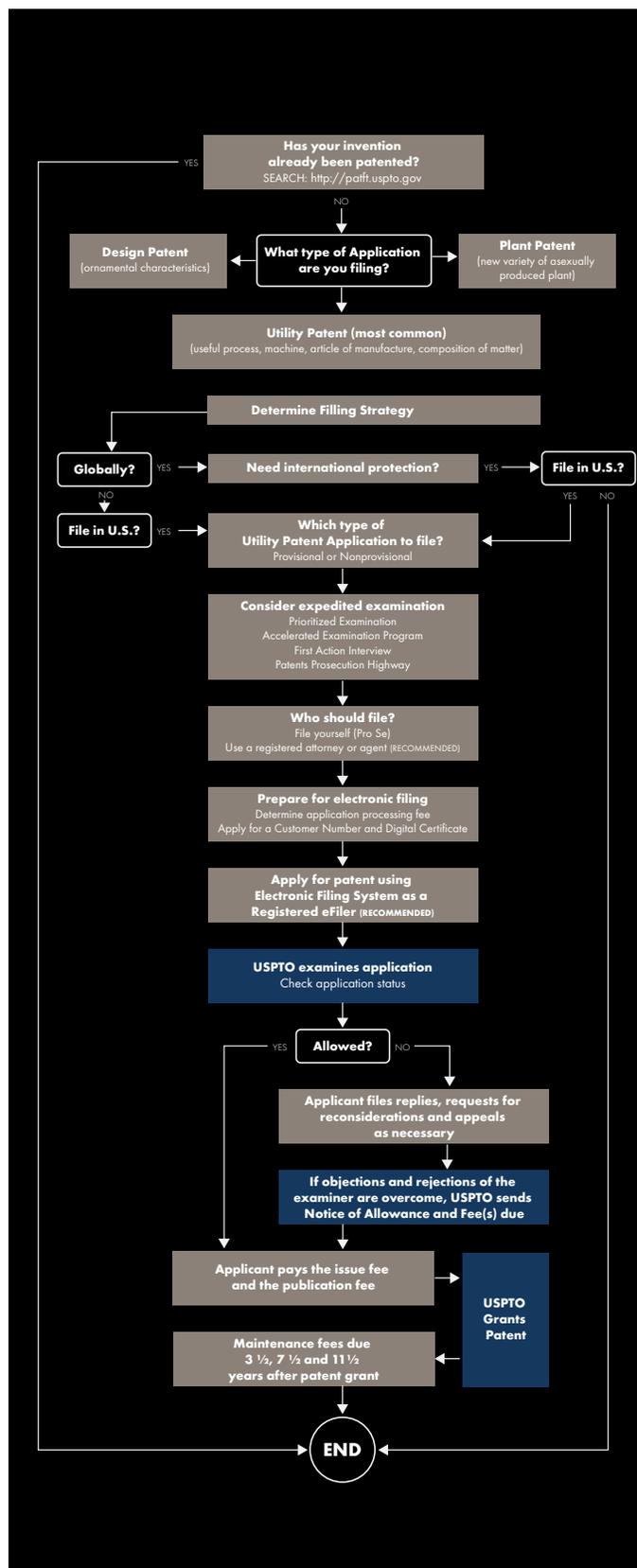
FILING PATENT APPLICATIONS

Applying for a patent is a well-established process governed by public law 35 U.S.C. The accompanying figure is a high-level flow chart of the process for preparing and submitting a utility application. It is important to note that the applicant is involved in and responsible for a large fraction of the process. In the tools section of this tutorial, you will find a sample USPTO Application Data Sheet that must accompany a patent application.

The table on the next page summarizes the information required to assemble and consider before filing a utility patent. While all 15 steps are important, from a small business perspective, several stand out for additional discussion.

Step 03 - the Inventor(s). The legal definition of an inventor is the person(s) who “reduced the idea to practice”. This reduction can be “actual” such as building a prototype, or “conceptual” such as working through the process mentally. The person with the original idea may or may not be part of this reduction to practice process.

Step 05 - Patent Application Type. Filing a provisional patent application or applications is an option and is a way of deferring costs while securing an early filing date. However, there are key considerations that should be made in deciding whether to file a regular or provisional application. A provisional application is never examined and cannot mature into a patent on its own. It is a placeholder within the patent office. If no action is taken, the provisional application expires within 12 months and is never published. The same subject matter can even be re-filed with a new date. Within a 12-month window, one or more provisional applications can be combined and converted into a regular patent application. This allows multiple filings on emerging concepts as development breakthroughs occur. However, assuming conversion within one year, the filing date of the provisional application comes into play as the priority date regard-



Consideration or Information Required Before Filing a Utility Patent

- STEP 01** Title of the invention (500 characters max)
- STEP 02** May the content of the application have any national security implications?
- STEP 03** Who are the inventors that contributed to the claimed invention
- STEP 04** What correspondence address should the USPTO use?
- STEP 05** Title, Docket (internal tracking) number. Also, small entity status inquiry for reduced fees, Application type – provisional or non, subject matter – plant, utility or design, and number of drawings included. Generally, each application has at least one drawing required.
- STEP 06** If you wish to incorporate a previous application by reference instead of re-typing it in the current application
- STEP 07** Request not to publish, which is only available if you do not intend to foreign file the application
- STEP 08** Grant of power of attorney to work with the patent office on your behalf
- STEP 09** Claim priority back to another application which is a PCT application
- STEP 10** Claim priority back to another application which is a foreign country filing
- STEP 11** Does the applicant claim priority to an application filed before March 16, 2013? If so it is afforded different treatment under the America Inventors Act. More information below
- STEP 12** Allowance of sharing patent application with other patent offices around the world
- STEP 13** Who represents the applicant – inventor, attorney, legal guardian or representative
- STEP 14** Is the ownership of the patent being assigned to a corporation or other entity
- STEP 15** Signature

ing foreign filing, which must occur within 12 months of the priority date. If no foreign filing is desired, this is not a concern.

An option exists to file a **World Patent Application under the Patent Cooperation Treaty (PCT)**. If there is a desire to file in four or more countries in total, the PCT route is cheaper and delays foreign fees for another 18 months. The application is filed with the USPTO as the receiving office and then at month 30 from the priority date, there is a requirement to file national applications in each country of interest, including the U.S. This is where the process gets much more expensive, but the advantage is having 30 months to market/exploit an invention while preserving rights in 150+ countries until down selecting to the exact countries in which you decide to file national applications. In addition, at month 16, an international search report with a written opinion regarding patentability of the invention is provided, which can assist with marketing an invention.

Step 05 - Drawing(s). A drawing should be included in an application whenever necessary or helpful in understanding your invention. The patent office has detailed formal requirements for drawings. Outside expertise that specializes in providing drawings is available if required to meet the requirements of the USPTO. Generally, drawings are only allowed in black and white, so do not depend on color to illustrate your invention. Unless otherwise specified, the first drawing is the one that will appear on the cover page of the patent.

Step 07 - Publication. If a decision has been made not to file in other countries, an option not to have the application published 18 months after filing is available. This prevents others from searching and reading the pending application and gain-

ing early knowledge about the technology. Otherwise, patent applications are published 18 months after filing.

Step 11 - The America Invents Act (AIA). The AIA of March 16, 2013 is the key date for distinguishing between the old “first to invent” patent law and the new “first to file” patent law currently in place. Under old patent law, an applicant had the ability to “swear behind” prior art assuming they could document making the invention up to one year before the date of the reference (using proof such as signed and witnessed lab notebooks). If an applicant making a new patent application can claim priority back to an application filed before this key date, the application will be reviewed using older law, otherwise it will be reviewed using current law. The general implications for business are increased emphasis on filing quickly for important inventions, as the first to file on a new invention would have priority under current law. Provisional applications are one cost-effective method to secure an early filing date.

Step 14 – Assignment. This section is where individuals assign their rights in an invention to an organization or employer. This process can become complicated should employees leave before filing. A properly executed employment agreement pre-assigning patent rights to an employer is recommended.

In this tutorial we have discussed the criteria for patentability, the different types of patents, and the process for filing provisional applications. In the next tutorial, we will discuss timelines and costs in greater detail. Please note that this information is provided for educational purposes only and is not a substitute for legal advice.