

These FAQs are intended only to provide information and education services to help members of the SDSU community better address their needs. The information is not legal advice. Please contact the [Technology Transfer Office](#) for assistance with your intellectual property needs. The SDSU University Policy governs over any conflict with this information.

Patents

Frequently Asked Questions:

1. What is a patent?
 - a. A patent is a legal right to exclude others from making, using, creating, or making derivatives of a specific invention. Patent law in the US was established in article 2 Clause 8 of the Constitution. A patent provides the holder the legal right to allow or disallow others from practicing a certain invention. It gives an incentive (a monopoly on a technology) to a person/company that brings forth useful inventions. A requirement for receiving a patent is the enabling disclosure of the best mode of practice of the patent in the invention. This means that if a person wanted to patent something, she would have exclusive right to practice that invention for the length of the patent life. However, once that patent expired, anyone can make, use, sell, etc. the same technology and the original inventor no longer has any claims on the invention. Also, in order to get this protection, the inventor must disclose the invention during the patent prosecution (prosecution means applying for a patent). So the government provides a short term monopoly in order to incentivize inventors to share their inventions with the general public.
 - b. Patents provide the owner the right to exclude others from practicing, using or selling a specific invention. This means that a patent holder has a monopoly on that invention for the length of the patent. Why does the government give a monopoly to an inventor who files a patent application? Because in order to receive a patent, the invention must be described in full in a written application that would allow another person(s) skilled in the same art to be able to build/make/use the same invention. This is termed “enablement” and it is important to patent law since the point of a patent is to get inventors to disclose their inventions in complete detail to the public through the application. After the term of the patent expires, the invention can be practiced by anyone with no rights reserved for the inventor. Also, unlike copyrights, a derivative of a patent is not owned by that original patent holder. That is, if B takes A’s patented invention, conducts her own research and develops new uses, functions, or parts to the invention described by A, then B owns that new patent and A DOES NOT have a right to practice B’s invention! This is very important, because it enables the forward progress of science without allowing A to control or limit new inventions or use of his own invention. However, if the A patent is broad, B may not be able to practice the new invention without infringing A, in which case, the parties are incentivized to negotiate terms outside of the courts in order to allow for the market to value the contribution of each invention.

- c. A patent owner only has the right to control the first sale of his/her patented object. So an inventor who patents a new bicycle seat cannot stop a person who purchased the seat from the inventor from selling it to someone else or making any changes or modifications to the product. This means that although a patent holder can restrict others from making, using or selling the patented items, the patent holder's rights do not extend so far as to continue an ownership interest in a product once it has been sold legitimately within those patent rights.

2. What can be patented?

- a. Patents can cover the embodiment of a process, use, physical compound, or other non-naturally occurring devices that are developed by people. Asexually reproduced plants can also be patented under their own patent laws. The basic view of patentability is if something is not naturally occurring, it can be patented. For example, finding a specific type of root in an isolated rainforest that can be used for the treatment of cancer is not an invention, because the root itself is naturally occurring. Similarly, a mathematical formula cannot be patented, since it is a thought and not an actual physical activity. If someone was able to patent $2+2$, the world of science, mathematics and first grade would come to a standstill.
- b. Over the last few years, software has made great strides in achieving patent protection. Originally, all software was thought to be an algorithm and, therefore, not patentable. Currently, if an application is drafted correctly, software can achieve very strong patent protection that is enforceable by the courts. If you have a software invention, it is important to discuss the application with a specialized patent agent or patent attorney for the drafting of the application.
- c. Designs can be patented under their own special rules. Please speak with a patent agent or patent attorney regarding patenting designs.

3. What is a trade secret?

- a. A trade secret is a non-disclosed invention that a company or person uses for generating commercial value. In order to be a trade secret, an invention must be kept confidential by the owner. However, patent laws restrict a person's ability to maintain a trade secret and potential patent rights. Specifically, a trade secret that is used to manufacture or otherwise process some product that is put into the stream of commerce is considered to be publicly disclosed; this is true even if the secret process itself is not determinable by the product itself. For example, if a company was to create a new process for pasteurizing milk that produces the exact same milk as the existing processes, the company will begin the one year clock for patentability even though there is no way to analyze the milk to learn what the new process is.

4. What is a Disclosure and why does it make my invention ineligible for patenting?

- a. Disclosure means that a person who is not an inventor, another employee of the same company which is the legal owner of a patent, or a person covered under a confidential disclosure agreement (CDA), was given information about the

invention that one regularly skilled in the art would be able, with sufficient research, to create substantially the same invention. In other words, if an inventor enables anyone else to be able to conduct his/her research and development or build his/her machine, that inventor has disclosed his/her invention. Also, any public use or sale, or even an OFFER TO SELL, an invention, is considered a disclosure. This means that the invention is no longer a true secret; it is being put into the general stream of commerce. In the US, our patent laws grant an inventor exactly one year from an enabling disclosure date before an invention becomes ineligible for patent protection. This means, if an inventor goes to a conference and discusses his/her new protein that was identified and synthesized, he/she has only 12 months to file a patent or he/she loses patent rights in the US. Unfortunately, the rest of the world is not so forgiving of disclosure. Generally, all global rights are lost the day such invention is disclosed except in some countries which have select rules that grant additional time.

5. How is an invention patented?

- a. A patent is applied for through the United States Patent and Trademark Office (US PTO). Typically, an inventor will file a provisional patent when he/she believes that there is a functioning, fully enabled invention. A provisional patent is reasonably inexpensive (\$100 for a small entity, more for a larger corporation) and does not require significant amount of work to submit. Usually, claims are not submitted in a “provisional”, so a patent agent/lawyer is not always used for the application. Also, a provisional is never reviewed by the US PTO, so an inventor can file a provisional, continue to develop the technology, and decide not to convert it to a utility at the termination of the one year term if there are reasons not to do so. A provisional patent acts as a place holder, so the inventor is able to point to a specific date and some record as the date of the invention, however, it does not require the technology to be completely enabled. So a provisional application provides options for an inventor that might not be completely prepared to submit a patent application or still has technical issues to resolve. Also, since they are easy to submit, if an inventor has some reason that they will be offering the technology for sale or otherwise disclosing the invention, a quick provisional application may be effective at preserving full global patent rights.

6. How long does a patent last?

- a. Under current law, a patent lasts twenty (20) years from the date of filing. Generally, a patent will take between two and four years to issue. The process of applying for a patent is called patent prosecution. The time spent during prosecution is counted as part of the 20 years protection, so an inventor has to take care not to waste this protection. If there is significant time needed to continue researching and developing a technology before it would be ready to be put on the market, an inventor may not want to disclose the technology until he/she has moved closer to having a final version. This is especially important in biology and chemistry patents, where it may take years of research and testing, plus formulating, to take an original invention before one has a final product. However, one does not want to risk losing a patent either. Luckily, it might be possible to apply for a very broad patent at the onset and then develop narrower

patents as the research is accomplished and the technology is understood in greater depth.

7. How much does it cost to patent?

- a. A patent can be very expensive, depending on the countries chosen for protection, the amount of negotiations with the Examiner, and the patent agent/lawyer used in the prosecution. SDSURF Technology Transfer Office uses several law firms to prosecute its patents, as well as specialists for prior art searches. It is not atypical for a patent to cost between \$10,000 and \$35,000 for US protection. Biotech patents tend to cost more and it is not unreasonable for those to cost in excess of \$75,000. Foreign patents are very expensive. Japan alone will cost approximately \$40,000 in fees plus the costs of translation and legal drafting.

8. Who can file a patent?

- a. Under US law, the first to invent rule governs US patents. First to invent means that an application is presumed to be the first inventor unless challenged by an Interference. A patent application can only be filed by someone with a legitimate ownership interest in the invention. In the case of multiple inventors, the US PTO will rule as to who applies first and a court can decide who an owner is. Under the Bayh-Dole Act, a university owns the patent rights for any invention developed by its faculty through support of a federal grant. SDSU's Technology Transfer Office (TTO) operates out of the SDSU Research Foundation Sponsored Research Administration.

9. Is my patent valid abroad?

- a. A US patent, also called a Utility patent, is only valid in the US. This means that a patent holder has no protection overseas for that invention. However, A US citizen can apply to have foreign protection through a PCT application. A PCT (Patent Cooperation Treaty) application is similar to filing a utility patent except that the invention cannot have had ANY public disclosure before filing and the first person to file for a patent is presumed the first inventor and, hence, the only person capable of achieving patent protection rights. A PCT provides 18 months from time of filing before the filer has to designate specific countries to apply for. Many countries can be very expensive. The US can be one of the designated countries, so a US inventor could choose to file a PCT instead of a utility patent. The advantage would be that he/she would have 18 months before the US patent office would receive the application, so it effectively pushes off the costs associated with prosecuting an additional 18 months, allowing the inventor to continue to research and develop the technology, possibly discovering if there is no commercial value so as to cease prosecution and not waste thousands of dollars.

10. What makes a patent invalid?

- a. Public Disclosure. Any enabling disclosure of an unpatented invention begins the one year grace period to file for a US patent. An enabling disclosure means that

the information provided is sufficient that a person skilled in the art of whatever scientific area(s) a technology covers can recreate a similar invention. In other words, if a researcher was to publish her manuscript in a peer-reviewed journal and that manuscript covers the data that were generated, how those data were generated, and how to use those data that would probably meet the threshold for being an enabling disclosure.

- b. Prior Art. Prior art is very similar to public disclosure, except it means that the exact elements of the claims exist in some published article, patent application, or other published medium prior to this inventor's application. All the claims must exist in order to be void by prior art.
- c. Obviousness. Obviousness broadens prior art to mean that if any publications, if aggregated together, would predict or replicate this invention, it fails for obviousness.
- d. Inventors listed on patent. If an inventor is left off of a patent application, a patentee generally may add the inventor's name at a later date with no ill effects. However, in some cases such as malevolent, purposeful misinformation of not naming an inventor (or naming one that is known not to have actually added to the actual invention), the patent office can invalidate the patent.
- e. Previous public use or offer to sell. Using an invention in the public, or selling (including just offering to sell) it without patent protection begins the one year grace period to file for a patent. If a patent is not filed in time, the invention will be considered to be part of the public domain and is not patentable because of the prior art.
- f. Poor patent prosecution. If a patent is not prosecuted well, it can affect not just the value of the claims but even the patentability of the material. Poor lawyering can cause an examiner to reject a patent based on a number of elements even though rewording of the application might allow the same patent. Unfortunately, a patent determined to be invalid is both costly as well as a mark against future patentability. It is important to use skilled legal advice before the US PTO when prosecuting a patent.