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## Patents: 10 things engineers should know

Basic patent knowledge can enrich engineers in many ways. Here are 10 tips every engineer should know about patent applications and patent law, including what not to do if you suspect infringement.

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Here are 10 tips engineers should know about patent applications and patent law, including what not to do if you suspect infringement.

**1** **What is a patent?** Simply put, it's an agreement under which the federal government grants you a time-limited monopoly for your invention. It is a common misconception that a patent gives the inventor the right

to practice his or her own invention. Not so. A patent gives the patent owner the right to prevent others from practicing the patented invention. To qualify to receive a patent, an invention must be "novel" (a new device or process that has not existed previously), "non-obvious" (not something that anyone could easily figure out on his own), and "useful" (it has some practical application).

Many patents are for inventions that improve existing inventions, so an inventor—or the company the inventor works for—to use the patented invention in a product it manufactures and offers for sale, may have to take a license from another patent owner. The classic hypothetical example of this is the invention of a siren for a fire engine. For the siren's inventor to produce and offer for sale fire engines with the newly patented siren, he may have to first license the patent for fire engines. Let's say another inventor comes along and invents flashing red lights for fire engines. To manufacture and sell fire engines that include a siren and flashing lights, this inventor will have to license both the patent for fire engines and the patent for the siren.

**2** **Why file a patent application?** There are a number of reasons to file an application for a patent.

- To protect market share. If your company produces a product that uses a patented





invention, making it public—and that includes your competitors—aware of your patent may prevent competitors from investing time and money in a competing product that might infringe your patent.

- To build a stronger patent portfolio as either an offensive or defensive strategy. If you end up suing a competitor for patent infringement (a fairly routine occurrence in the world of intellectual property), having all of your proprietary technology patented enables you to mount a more effective offense. If your competitor sues your company for patent infringement, a larger portfolio provides the best defense for counterclaim litigation or a cross-patent license.

- To make it easier to transfer your technology. A patent provides legal protection and enables you to more easily license or sell your technology to others.

**3 Should you patent your invention, or keep it as a trade secret?** An alternative to applying for a patent for your invention, and disclosing the invention as part of that process, is to keep the invention as a trade secret. The issue in determining whether or not to patent the invention is how difficult would it be to reverse engineer the product or process? If reverse engineering your invention would be relatively easy, the invention should be patented to protect it— from copying and from the possibility that your invention is innocently and independently reinvented by another party.

If it would be virtually impossible—or very unlikely—that someone could reverse-engineer your invention, a patent may not be the best choice; trade secret protection, which also has the advantage of running in perpetuity, may be a better choice. As a rule of thumb, a product should be protected by a patent while a manufacturing process or your special sauce may be better protected as a trade secret.

**4 Consult a patent attorney to assist with prosecution of the patent.** One of the biggest mistakes an inventor can make is trying to

## Patents 101 for engineers

1. What is a patent? Simply put, it's an agreement under which the federal government grants you a time-limited monopoly for your invention. An invention must be "novel," "non-obvious," and "useful."
2. File a patent application to protect market share, build a stronger patent portfolio, and to make it easier to transfer your technology.
3. Decide if the invention should be protected by a patent or trade secret.
4. Consult a patent attorney to assist with prosecution of the patent.
5. Choose the right patent attorney for the job, one with experience in the same field as the invention.
6. A provisional patent application doesn't offer full protection.
7. Consider location.
8. Use "Patent Pending" appropriately.
9. After being issued a patent, mark the product or service with the relevant patent number(s).
10. Know what to do—and not do—if you believe your patent is being infringed. (Don't contact the infringer yourself.)

write and prosecute a patent application by himself. Knowing the invention inside and out does not qualify the inventor to write and prosecute an effective patent application. You may end up with no patent (because your application for a patent is rejected by the Patent Office), with a patent that is too broad (and hence invalid), or with one that is too narrow to provide much protection at all. Engage a patent practitioner (a patent attorney or patent agent) to assist you with the prosecution of your application.

**5 Choose the right patent attorney for the job.** All patent attorneys and patent agents are not created equal. Consider the attorney's technical background and expertise. Although most patent attorneys can work in a broad range of technologies, it's best to choose an attorney whose specialty area is the same as the field of your invention. So make the attorney's background and experience an important part of your search criteria. Select a patent practitioner as you would any professional services provider. The fees the patent attorney or patent agent charges are just one factor to consider, so do not automatically select the

least expensive service provider. Select the one that you are confident will provide the greatest value. That may require meeting with or talking to several patent practitioners until you find one who is the right fit.

**6 Do not put too much weight on a provisional patent application.** It has its place in the arsenal of intellectual proper (IP) tools, but many inventors make the mistake of thinking that once they've written and filed a provisional patent application, their invention is protected. Your pat-

**“A patent gives the patent owner the right to prevent others from practicing the patented invention.”**

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ent agent or patent attorney will advise you if such a filing is in your best interest. A provisional application establishes a filing date for your patent application, and a provisional application can be converted to a utility application within one year of its filing date.

**7** **Where should you file for patent protection?** File a patent application only in those countries where you intend to enforce the patent. Remember, a patent gives you no right to actually practice your invention, so a patent is essentially nothing but a right to exclude others (or license the patent or litigate for patent infringement with an opportunity to get an injunction and or damages awarded). Most holders of U.S. patents and foreign patents often bring litigation in the U.S. Suing in foreign countries may be more difficult for an American inventor.

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Besides, other countries do not allow legal representation on a contingency basis, as in the U.S., so litigating a patent infringement case in a foreign country for an independent inventor could be prohibitively expensive.

**8** Use “Patent Pending” on products that the patent will cover once the application is filed. Doing so informs your competitors that the product will (hopefully) soon be patented. However, use “Patent Pending” only if you have actually filed either a patent application or a provisional patent application. False usage of “Patent Pending” is against the law, and you can be fined for it.

**9** **Once issued, properly mark** your product or service with the relevant patent number(s). This fulfills the “marking requirement” that gives infringers notice that the item is under patent protection. Failure to mark your products with the patent number may prevent you from collecting past damages. Marking puts infringers on notice (lets them know that your patent exists and that they may be infringing it) and is a necessary part of patent enforcement.

**10** **Know what to do—and not do—**if you believe your patent is being infringed. After being reasonably certain that your patent is being infringed, proceed cautiously:

- Do not contact an infringer about your claim of patent infringement. This could trigger a declaratory judgment action (also known as a “DJ”) by the infringer. A declaratory judgment action is essentially a pre-emptive strike by the infringer, putting the patent owner on the defensive by alleging that the patent is invalid, unenforceable and/or not infringed.

Why does this matter? Because through the act of filing a motion for declaratory judgment, the infringer can choose the venue (court) where the lawsuit will be heard, and it makes the patent owner the defendant, rather than the plaintiff, in any ensuing litigation. To use a sports analogy, alerting the infringer that you know that it is infringing your patent takes you off the offense, puts you on the defense, and gives the infringer the home field advantage!

- Do not do nothing! While you do not want to directly contact the infringer, you also do not want to do nothing, as this may give the infringer what is called a “laches” defense. Laches is the failure of the patent owner to take action against a known infringer in a timely manner after discovering the infringement, and it can result in the inability of the patent owner to collect damages for past infringement.

- Do engage an IP litigation law firm or a patent enforcement company to help you enforce your patent. Attempting to enforce your own patent is roughly the equivalent of performing brain surgery on yourself. Select a patent enforcement team that has successfully tried patent enforcement litigation and produced results for the patent owner. You will have one opportunity to enforce your patent, so put your best team on the field. **ce**

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