



IP ESSENTIALS

A Toolkit for Entrepreneurs,
Innovators, and Business Owners

SOFTWARE PATENTS



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A patent gives the patent-holder the right to exclude others from making, using, offering, and selling the patented invention. A software patent covers an invention implemented as software, which may include the algorithmic steps, executable code, and/or a hardware system that uses the software.

Q *Is software patentable?*

A In the United States, many software-based inventions are patentable. However, certain kinds of software inventions—most notably those that improve on traditionally human activities, such as marketing and finance—face steeper hurdles than software relating to inherently computer-based technology. Many other countries also allow software-based inventions to be patented to some extent, subject to their own restrictions and requirements.

Q *What makes software patents unique?*

A Because of their proximity to mathematical concepts and what the patent office considers “abstract ideas,” some software-based inventions are not considered patent-eligible subject matter. In recent years, the viability of software patents has been under considerable scrutiny in the United States, including several notable federal court decisions that have made software-based inventions more challenging to patent than many other kinds of inventions. However, the United States Patent and Trademark Office (USPTO) has instituted guidance that provides a path to patentability for a wide range of software-based inventions. To satisfy those guidelines and show that a software-based invention is patent-eligible, a patent application for a software-based invention must include certain types of information that are not required in other kinds of patent applications.

Q *How much detail is needed to patent a software invention?*

A A patent application needs to include enough information that somebody of ordinary skill in the relevant technical field would be able to implement the invention. For software inventions, it is not necessary to include source code. However, the description should include any key functional modules, along with algorithms for each module that go beyond merely inputs and outputs. The patent application needs to describe, in at least some detail, how each module produces the outputs from the inputs. There have been cases where failure to describe the algorithms inside of software modules have resulted in patents being deemed unenforceable. In general, it is best to provide your patent practitioner with as much detail as possible—including whitepapers, flowcharts, architectural diagrams, etc.—so they can incorporate the necessary level of detail in the patent application.

Q *My software is already live. Can I still patent it?*

A Going live with software counts as a public disclosure for patentability purposes. In the United States, there is a one-year grace period from the date of the first public disclosure until you are barred from obtaining a patent on what was disclosed. During that time, there is a risk that somebody

could beat you to filing a patent application for the same technology, so best practice generally is to file a patent application before going live—or, if already live, as soon as possible within the one-year grace period. However, it may no longer be possible to patent the software in countries where any public disclosure whatsoever precludes filing a patent application.

Q *Does my software need to be implemented to file a patent application?*

A No. A software-based invention does not need to be implemented to file a patent application. In fact, it is often better to file a patent application well before the software is implemented. Testing activities, including minimum viable product (MVP) and beta testing, could result in inadvertent public disclosures that jeopardize patent rights. You may file a patent application even if you are not sure whether you will ever actually implement the invention.

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Q *When can I approach prospective investors or customers?*

A Ideally, the best time to approach prospective investors or customers is after a patent application has been filed, when there is no risk of inadvertently forfeiting patent rights as to what is described in the patent application. In some cases, it makes sense to file a provisional patent application first, providing up to a year to see which features are the most commercially valuable and focus a non-provisional application accordingly. If pre-filing discussions with prospective investors or customers are unavoidable, a carefully drafted NDA—if all parties are willing to sign—can help preserve patent rights in the meantime.

Q *How can I test my software without forfeiting patent rights?*

A The best way to preserve patent rights is to get a patent application on file before making the software available to anybody outside the company. If that is not possible, then all testing should be done under NDA, to help prevent the testing from being considered a public disclosure of the invention. However, an NDA may not be sufficient in all cases. For example, a customer involved in beta testing may sign an NDA but then make the beta product available to downstream end users who did not sign the NDA, resulting in a public disclosure.

Q *Can I discuss my invention at a conference?*

A Discussing your invention at a conference (or any other public location) qualifies as a public disclosure that starts the one-year grace period in the United States and could completely bar patenting in some other countries. Even submitting an abstract can qualify as a public disclosure, depending on how much detail is included in the submission. Public disclosure also increases the risk that somebody who learns of your invention could beat you to filing a patent application.

Q *How are software patents different from copyrights?*

A A patent protects an invention, which is generally broader than any specific implementation. Copyright protects the specific expression of an idea, but not the idea itself. For example, a copyright on source code means others cannot legally copy that code, but does not prevent somebody from independently developing a competing product. A patent grants the right to block competitors from developing their own versions of the patented invention.

This IP Essentials Topic is one of a series:

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