Office of Technology Management informational series:

The Patent Process

- Metals
- Fuel cells
- Additives
- Computer software
- Coatings
- Machinery
- Semiconductors and chips
- Industrial processes
- Filtration
- Genetic markers
- Photonics
- Grain and food processing
- Drug targets
- Equipment and devices
- Drug design
- Microorganisms
- New compounds
- New genes and their functions
- Polymers
- Gene transfer methods
Facts About Patenting

The Standard Tests of Patentability

A *patentable invention is anything man made that meet the tests for patentability, which are:

**New or novel.** The invention must be different from all known inventions, products, and published ideas. This does not mean that every aspect of an invention must be entirely new or novel. You can selectively patent only the new aspects if they also meet the other two tests.

**Non-obvious.** The invention cannot be an obvious or a logical extension of a known idea or invention. It cannot be readily apparent to a person skilled in the field of the invention.

**Useful.** The invention must have a practical application or utility.

### U.S. and Foreign Patent Application Timeline

<table>
<thead>
<tr>
<th>Duration</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>1 year</strong></td>
<td>International- file for coverage under PCT (Patent Corporation Treaty)</td>
</tr>
<tr>
<td><strong>18 months</strong></td>
<td>U.S.- patent application published</td>
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<td></td>
<td>International- international search report indicates related patents + publications</td>
</tr>
<tr>
<td><strong>12-24 months</strong></td>
<td>U.S. Prosecution- first office action from USPTO, generating OTM responses + amendments to the claims</td>
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<td><strong>2 years</strong></td>
<td>U.S.- patent may issue (avg. time 18-36 months)</td>
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<td>International- PCT examiner indicates patentability</td>
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<tr>
<td><strong>30 months</strong></td>
<td>International- individual applications + translations filed in specific countries and regions when the case warrants.</td>
</tr>
<tr>
<td><strong>4-10 years</strong></td>
<td>International- individual foreign patents may issue</td>
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*issued U.S. and foreign patents have a life of 20 years after the first filing

The Patent Monopoly

The U.S. Constitution recognizes the value of inventions and provides the owner of a patent with a time-limited monopoly to stop others from exploiting the invention. In exchange for this exclusive right, the patent document, which is published, must fully describe the invention. In that way, the patent monopoly provides the incentive to share advances with the public and thereby contribute to growth in the field. Having a patent doesn’t mean you can make, use, and sell the invention covered by it. It only means you can stop others from doing so. Having the right to make and sell your invention depends on whether the invention also infringes someone else’s patent.

Patents as Property

A patent is property like a house or car that may be sold, leased, or rented to others for “royalties.” Patent rights are often transferred through licenses, rather than outright sales. The patent owner can decide how to allow others to use his property and can divide up rights in the property in different ways: for example, exclusively or non-exclusively, by field of use, or by geographical region.

Inventorship

The legal criterion for inventorship do not equal those used for authorship. Broadly, an inventor is one who alone, or together with others, conceived of the ultimate working invention. Inventorship is not a reward for hard work to someone who only worked under direction. The OTM refers the final inventorship determinations to outside patent counsel. Inventorship is tied to the claims, and is determined at the time the patent application is filed. As the claims in an application change, so may inventorship.

Ownership

Inventorship does not equal ownership. Almost always, organizations own the inventions developed by their employees; University of Illinois patents are owned by the Board of Trustees.

Being first

Not infrequently, two entirely different groups invent the same invention. What happens then? In the U.S. it is the inventor who can document he/she was the first to invent (conceive) and was diligent in putting their invention into practical form and filing a patent application. This is where signed, dated, and preferably witnessed written records become critical. Without thorough documentation, it is possible the first inventor may lose. RECORDS can win or lose patents. In the rest of the world, the first inventor to file a patent application is entitled to the patent.
Applying for a Patent

Preparation

After interviewing the inventor(s), a patent attorney prepares a draft patent application, which includes a "specification" that describes how to make and use the invention and one or more "claims" that define the scope, or limits, of what is new about the invention. The process of preparing and refining the application typically lasts 4 to 12 weeks, although it can be done much more rapidly under special circumstances. It is very important to have a thorough specification, because the specification cannot be changed once the application is filed. The claims can be changed, but only if the changes are supported by the information in the specification.

Filing

After the patent attorney and inventor(s) agree on the accuracy and completeness of the patent application, the attorney files it with the US Patent and Trademark Office (USPTO). At that time, or shortly thereafter, each inventor signs formal documents required to accompany the application.

Information Disclosure Statement

Each inventor is required to provide the USPTO with any publications and patents the inventor is aware of that may affect the patentability of the application. These references are submitted to the USPTO by the attorney in an Information Disclosure Statement (IDS). OTM helps collect and assemble the required documents, there is no need for the inventor to do any searching.

Prosecution

The USPTO assigns the application to a patent examiner who specializes in the particular technology area. The examiner considers the scope, or breadth, of the claims against prior patents and publications, and issues an "office action" accepting (rarely) or rejecting (typically) the claims as not distinguishing over what is already known. In the case of claim rejections the patent attorney, with the assistance of the inventor, rebuts the examiner's arguments and/or responds with an amendment to the claims. One or more such iterations are typically required to obtain allowance of the patent application.

Patent

An issued patent has a nominal lifetime of 20 years from the date of filing. Maintenance fees are required to keep the U.S. and foreign patents active. In the U.S. they occur at 4, 8, and 12 years, with the amount of the fee increasing with each subsequent payment.

The Cost of Patenting

The cost of filing and obtaining can vary widely, depending on the technical field and the specifics of each invention, but a typical cost might be around $25,000.