



[Intellectual Property](#) • [Guide to IP](#) • [Ownership Policy](#) • [FAQs](#)

A Guide to Protecting Intellectual Property

This Guide to Protecting Intellectual Property has been prepared for the Canadian University Intellectual Property Group (CUIPG) to provide the Canadian university community with information on matters pertaining to intellectual property.

The Canadian University Intellectual Property Group comprises the Directors of Intellectual Property/Industrial Licensing offices at the following Canadian universities: [British Columbia](#), [Alberta](#), [Waterloo](#), [Western Ontario](#), [McMaster](#), [Toronto](#), [Queen's](#), [Montreal](#), [McGill](#) and [Laval](#).

This guide is copyright-free and may be copied and distributed by any Canadian university.

Table of Contents

- >Overview
- >Patents
 - What is Patentable?
 - How Do Foreign Patents Work?
- >Publication
 - Grace Period
 - What is Public Disclosure?
 - What Constitutes Public Disclosure?
- >Copyright
- >Know-How and Trade Secrets
- >Confidentiality Agreements and Biological Material Transfer Agreements
- >Invention Disclosure (Confidential)
 - When Should I Disclose?
 - How Do I Make an Invention Disclosure?
 - Inventorship
 - What Searching Should Be Done?
- >Commercialization Process
- >[Invention Disclosure Form](#)



[intellectual
property]

Overview

What is intellectual property?

Intellectual property simply defined is any form of knowledge or expression created with one's intellect. It includes such things as inventions, computer software, trademarks, literary, artistic musical or visual works and even "know-how."

Inventions may be protected by patent and registered industrial design. Software, literary, artistic and musical works may be protected by copyright.

The initial ownership of intellectual property, in most cases, resides with the creator of that intellectual property, but in many cases rights are assigned to the university. Policies with respect to intellectual property vary at different institutions and all readers are encouraged to review the policy of their respective institutions relating to ownership, obligation to disclose, sharing proceeds from commercialization and conflicts of interest. Traditionally, universities in North America have allowed their faculty members to retain their copyright in literary, artistic and musical works.

[>> View Queen's policies regarding IP ownership](#)

Most inventions and software created at Canadian universities are based on research primarily sponsored by some form of government funding. There is, therefore, some onus on those who own that intellectual property to make efforts to ensure that it is utilized for the benefit of the public at large. That, in most cases, requires protection and commercialization through, if possible, a Canadian-based firm. Intellectual Property Management offices have been established at most research-intensive universities to provide advice and services to the university community to facilitate the protection and commercialization of intellectual property.

The economic and social value of inventions and software generated from university research has clearly been demonstrated. Most of the major discoveries giving rise to the birth and growth of lasers, semi-conductors, super-conductors, computers and biotechnology have come from university research. As Canadians, we must learn to capitalize on the knowledge which is created within our university and hospital communities if we are to be competitive in the years ahead. In order for this to happen, researchers and administrators must have an awareness of the importance of inventions and software, what should be done to protect these types of intellectual property and how the intellectual property can best be exploited to benefit the Canadian public.

Patents

What is a Patent?

A Patent is a right granted by a national government, upon application, and in exchange for a complete disclosure of an invention. The disclosure is initially a confidential disclosure to the patent office, which later becomes a non-confidential disclosure to the public at large. A patent grants to the applicant the right to exclude others from making, using or selling the claimed invention for a limited period of time. In Canada, for example, it is 20 years from the date of application, for applications filed since 1 October 1989. In the United States, the term is also 20 years from the date of the first filed U.S. application; however, for applications filed since 29 May 2000, the term may be extended based on any delays in issuance of the patent caused by the [U.S. Patent and Trademark Office](#).

What is Patentable?

By law, in order to be patentable, an invention must be novel, it must not be obvious to a person skilled in the field of the invention, and it must have utility.

Products, processes, machines, manufactures or composition of matter, or any new and useful improvement of any of these, such as new uses of known compounds, are patentable subject matter.



[intellectual
property]

Novel genetically engineered lower life-forms and new microbial life-forms can be patented in some jurisdictions, such as the United States and Canada, but not in others. Novel genetically engineered higher life-forms are patentable subject matter in some jurisdictions including the U.S., but have been found by the Supreme Court of Canada not to be patentable subject matter in Canada.

Methods of medical treatment are also patentable in some jurisdictions, such as the United States, but not in others, including Canada. Scientific theorems or principles, and methods of doing business or playing games are not patentable subject matter in Canada.

Provided that software can meet the usual criteria for patentability, it can be patented in some jurisdictions. In practice, however, it is difficult to meet the novelty requirement and software patents are not very common. The preferred form of protection for software is by way of copyright.

New plant varieties can be protected under the [Plant Breeders' Rights Act](#) in Canada or by a Plant Patent in the United States. Some other jurisdictions, but not all, have equivalent legislation.

Integrated Circuit Designs can be protected in the United States under the Maskworks Protection Act. Canada has the [Integrated Circuit Topography Act](#). Other countries are considering similar legislation.

How Do Foreign Patents Work?

Patents do not cross national boundaries and, at present, there is no such thing as an International Patent. Harmonization of the world's patent laws is progressing rapidly, but in general each country grants its own patents based on its own standards.

Under the Paris Convention of 1887, the date of the first filed application for a specific invention becomes the effective filing date for all subsequent applications for the same invention filed in member states. However, subsequent applications for the invention must be filed within one year of the filing date for the first member state. This is very important when considering the effect of publication in a scientific or other journal on a foreign patent application. Almost all industrialized countries are signatories to the Paris Convention.

In Europe it is possible at the [European Patent Office](#) to file a single application (in English, French or German) to protect one's rights in up to 18 European countries. A single regional patent is granted but is not effective until it is ratified in each National Patent Office selected by the applicant by paying the appropriate national fees, translating into the local language, and meeting local requirements as to form of claims, etc.

In our global economy, it is usually advisable to initiate steps to protect foreign patent rights before commercialization is contemplated or completed. The [Patent Cooperation Treaty](#), to which Canada acceded in 1989, offers an alternative mechanism of initiating steps to protect foreign patent rights by deferring some of the major expenses (e.g., foreign translation costs) for up to 30 months from the initial patent filing.
>> [Learn more about Queen's policies regarding patents](#)



[intellectual
property]

Publication

As mentioned above, one of the criteria for patentability of an invention is that the invention must be novel, i. e., no prior [public disclosure](#) of the invention has been made by the inventor or others. Most developed countries follow a policy of absolute novelty, i.e., no patent can be obtained if the invention has been publicly disclosed in any manner, anywhere in the world.

Grace Period

Canada and the U.S.A., however, provide a grace period of one year from the first public disclosure of the invention, during which the inventor can file a patent application, provided that the disclosure was made by the inventor or someone who obtained the information from the inventor. Few other countries are as generous to inventors and it is advisable, therefore, not to disclose the invention to anyone until a patent application has been filed. Disclosure can, however, be made on a confidential basis and such disclosure will not affect the ability to patent.

What is Public Disclosure?

It is the relationship between the parties that determines whether the disclosure is public or made in confidence. The disclosure is legally confidential if, when receiving the information, the receiving party personally understands and accepts a duty to keep the information confidential. A disclosure to an academic colleague may or may not be considered confidential depending on the understanding between the parties. Any printed publication in a newspaper, scientific journal or other written form available on an unrestricted basis is a public disclosure, as is an oral presentation at a public meeting. Published pre-prints or abstracts of (a) papers for a scientific meeting or (b) degree theses are also considered public disclosures. Other forms of public disclosure include conference proceedings and seminars; scientific conferences, poster sessions, industry meetings and offers to sell.

What Constitutes Public Disclosure?

A written or oral public disclosure can be used as a prior art reference by a patent office examiner evaluating a patent application if enough of the invention is disclosed to enable a person skilled in the relevant field to put the invention into practice. Such disclosure can also be used by a Court to invalidate an issued patent. In some countries, experimental use of the invention in public will count against patentability.

It should be noted that for U.S. patent applications, a sale in the U.S. (or even an offer for sale) of an invention will destroy novelty, if the sale or offer for sale is made more than one year before the filing date of the patent application. This holds true even if the offer for sale in the U.S. is made under a confidentiality agreement.

It is advisable to disclose an invention to your institution's Intellectual Property Management Office before the details of the invention are included in any grant application. Disclosure to the Intellectual Property Management Office will be confidential. Although disclosure in a grant application does not represent public disclosure, at least in Canada, reviewers will be exposed to the invention and represent an unnecessary threat to patentability. In the United States, grant applications may be considered public documents under Federal Freedom of Information legislation.



[intellectual
property]

Copyright

Copyright is the exclusive right of the creator, or subsequent copyright holder, to reproduce a work. Copyright subsists as soon as an artistic, literary or musical work or software is created, and registration at the Copyright Office is purely voluntary. It is however, advisable to put the public on notice that the creator is claiming copyright by marking all copies of the work with a Copyright Notice.

Registration of a copyright facilitates the copyright holder's rights in the event of a legal dispute. Copyright protection in Canada lasts for the life of the creator plus fifty (50) years. Copyright extends to other countries by virtue of treaties such as the [Berne Convention](#) and [Universal Copyright Convention](#) and the term in other countries depends on the national law.

>> [View Queen's policies regarding copyright](#)

Know-How and Trade Secrets

A researcher's know-how can often have considerable value. A researcher will often possess valuable confidential know-how and experience to permit commercial optimization of a process or product. Know-how or trade secrets can in fact be licensed independently and a know-how license need not be restricted to the term of any patent.

Confidential information and know-how should, therefore, be clearly defined and disclosures should be covered by a written contract.

Confidentiality Agreements and Biological Material Transfer Agreements

An invention may be disclosed prior to filing a patent application, provided it is covered by a Confidentiality Agreement between the inventor and the party to whom the invention is disclosed. Such agreements provide evidence of the receiving party's understanding of the confidential nature of the information and express in written form the receiving party's obligation to keep the information in confidence. These are simple agreements and can be obtained from your institution's Intellectual Property Management Office.

Biological Materials can be used to develop modified or derivative products from the original materials. It is important to control the use of transferred biological materials, and standard material transfer agreements are now being used by most institutions in North America. You should consult your institution's Intellectual Property Management Office before you transfer any biological material to any academic or industrial collaborator/researcher.

>> [Access Queen's Uniform Biological Material Transfer Agreement form here](#)



[intellectual
property]

Invention Disclosure (Confidential)

When Should I Disclose?

Most countries, including Canada, operate under a "first-to-file" patent system. That is, when two or more applications for patent for the same invention are pending, the patent will be granted to the first applicant to file a patent application.

The United States operates on a "first-to-invent" system, i.e., the patent is granted to the person able to prove the earliest date of invention, regardless of the date of filing of the patent application. Previously under U.S. law, a date of invention could only be established for (a) work done in the United States or (b) the date of introduction of the invention into the United States if the work were done outside of the United States. However, under the North American Free Trade Agreement (NAFTA), Canadian and Mexican inventors can establish a date of invention based on work done in either Canada or Mexico on or subsequent to 1 January 1994. If the invention date is prior to 1 January 1994, the old rules apply.

Taking this a step further, under the General Agreement on Tariffs and Trade (GATT) (Uruguay Rounds), inventors in any World Trade Organization (WTO) country can, with certain provisos, establish an invention date for work done in a WTO (GATT) country on or subsequent to 1 January 1996. Here, again, the old rules apply for work done before this date.

It is important therefore that you discuss your invention with your Intellectual Property Management Office as early as possible in order to establish an invention date, and certainly before any publication, including abstracts, has taken place.

How Do I Make an Invention Disclosure?

Your first step should be to contact your institution's Intellectual Property Management Office to indicate that you feel an invention has been made. Each university has a different intellectual property policy and your disclosure may be handled slightly differently depending on the institution.

You will be asked to complete an Invention Disclosure Form which has been standardized by Canadian universities. Consult your institution's Intellectual Property Management/Technology Transfer office, or their website, for a copy of this form.

[>> Access PARTEQ's Invention Disclosure Form here.](#)

Inventorship

An inventor is a person who has had an original idea or otherwise contributed intellectual input to one of the claims of a patent. A patent application may be filed naming one or more inventors. A person who works under the direction of another and does not contribute any original thought to the claimed invention, i.e., "works as a technician" to confirm an invention, must not be named as an inventor. Professional collaborators may or may not contribute to the inventive concept being claimed and great care should be taken in deciding who should be named as an inventor. It is important to understand that inventorship is a legal matter, not a collegial matter -- not all co-authors of a publication need be co-inventors. Collaborators not deemed to be co-inventors can, however, be recognized through some sharing of the net proceeds from the invention. If you are in doubt as to inventorship, your Intellectual Property Management Office should be consulted and a professional opinion obtained.

What Searching Should Be Done?

An extensive literature search should, of course, be done before any research project is undertaken. Once an invention has been made, you should update your literature search and, if possible, supplement it with a review of the patent literature. All available literature should be drawn to the attention of the Intellectual Property Management Office. The Intellectual Property Management Office will, if appropriate, arrange for a detailed patent search, usually in the United States Patent Office.



[intellectual
property]

Commercialization Process

Before an institution's Intellectual Property Management Office devotes considerable resources to protecting and exploiting an invention you will most likely be asked to assign your invention to the institution or its designate. An assignment is a legal document which transfers ownership of your intellectual property to the institution, and it is recorded in the Patent Office.

[>> Access Queen's Intellectual Property Agreement here](#)

The Intellectual Property Management Office normally bears the initial cost of protecting and exploiting your invention. If your invention is successful in generating income, the first charge on that income is reimbursement of the costs. Thereafter, income will be divided between the Institution and the inventors. The inventor's return will vary depending on your institution's intellectual property Policy. You may expect anywhere from 25 - 50% of the net proceeds.

A sharing agreement should be put in place and lodged with the Intellectual Property Management Office at the outset to formalize how the inventor(s) will share their proceeds. There is no reason why an inventor cannot allocate a portion of his/her proceeds to someone who has contributed to the development of the invention but who is not formally considered an inventor.

The Intellectual Property Management Office will have a number of possible ways to attempt commercialization of the invention. If suitable, the invention may be used to facilitate the formation of a new company to develop the technology. If the invention is not suitable for new venture creation, a licensee(s) may be sought to commercialize the invention under license. Licenses can be arranged in a variety of ways, but almost all will include some form of continuing royalty.

[>> Access PARTEQ's commercialization process here](#)

An inventor can play a critical role in commercializing the invention. The inventor will normally be relied upon to participate in scientific discussions with potential commercial partners and, on occasion, may be actively involved in negotiating a particular deal. Participation by an inventor will, however, always be subject to the policy of each Institution.