The Patent Process

Invention disclosure

- Should provide a complete description as to enable a person of ordinary skill in the arts to make and use the invention
- Should distinguish the invention over the prior art, identify the advantages of the invention including relevant problems the invention solved, as well as identification of all alternative methods or competing technologies which would accomplish the same results of the invention
- The inventor is encouraged to include all supporting drawings, reports, photos, and other relevant data

Prior art search

- Prior art search is performed to ensure novelty
- Can be performed by inventor, patent attorney or patent agent, and/or, third party search firm. Usually involves a combined effort by these parties

File provisional application

- Optional to file
- Are temporary applications and are not examined by the USPTO
- Reserves the inventor the rights to the inventive concept identified in the application. A utility application must be filed within **<u>one year</u>** in order for this right to mature

File utility application and/or international application

- A utility application is filed to protect the way an invention works, as opposed to its external appearance or trade name. Utility applications either mature into a utility patent or become abandoned. Utility patents provide patent protection within the United States and in other countries via a PCT filing for a period of 20 years, measured from the utility application's filing date

One year (max)

~Three years

Examination by USPTO

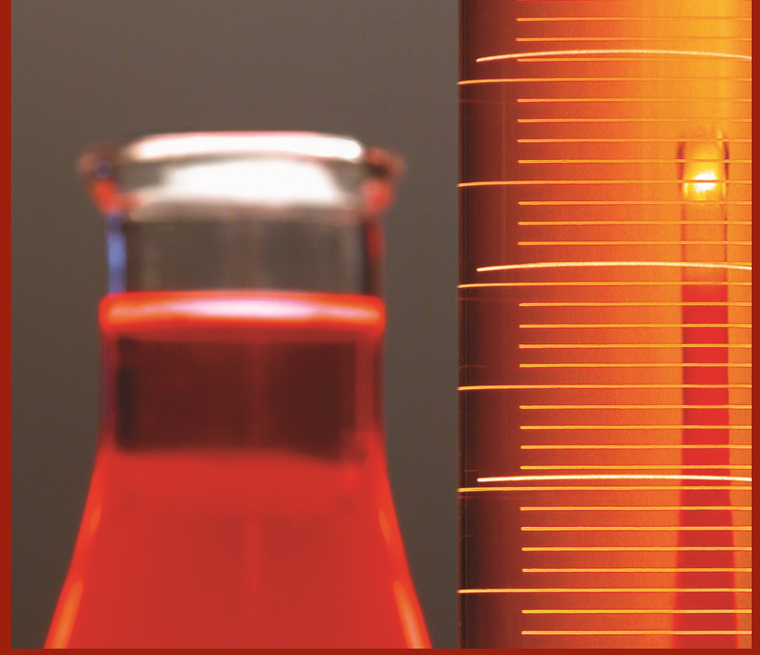
- **<u>First Office Action</u>**
  - Respond with Amendments, arguments
  - Received approximately 1.5 years after utility filing
- **<u>Second Office Action</u>**
  - May result in Final Rejection or Allowance
  - Final Rejection may occur anytime after a claim has been twice rejected, regardless of the reason it was rejected
- **<u>Options after Final Rejection include:</u>**
  - (a) File a continuation
  - (b) File a Request for Continued Examination
  - (c) Appeal to the Board of Patent Appeals and Interferences
- **<u>Third Office Action</u>**
  - Allowance

Allowance

- Issue fee is due within 3 months of Notice of Allowance

Patent Issues

- Patent remains active for a maximum of 20 years from the filing date of the Utility application
- Must pay Patent Maintenece fees in order to keep patent alive



The Office of Technology Commercialization at Rensselaer supports researchers in protecting intellectual property and bringing discoveries into the commercial marketplace. We are dedicated to building relationships with commercial partners to benefit Rensselaer, researchers, and the broader community.

Intellectual Property, Technology Transfer and New Ventures

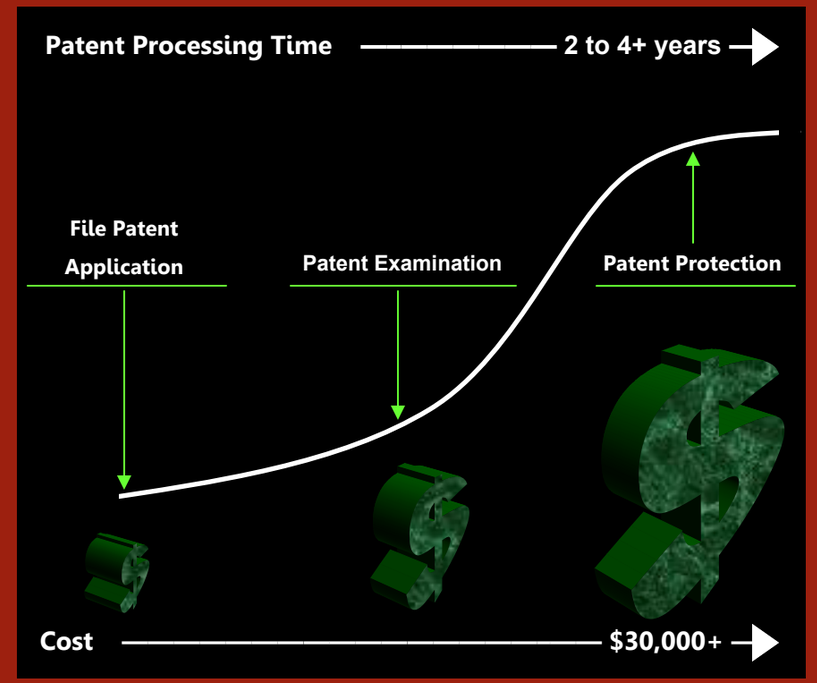
Rensselaer Polytechnic Institute
110 Eighth Street, J Building
Troy, New York 12180

Phone: 518-276-6023
Fax: 518-276-6380
E-mail: otc@rpi.edu

www.rpitechnology.com

OTC 8/10

The Patent Process



Intellectual Property, Technology Transfer and New Ventures

Rensselaer

Understanding Patents and the Patent Process

The patent system added the fuel of interest to the fire of genius." — Abraham Lincoln

Patent Definition:

A **patent** is a set of exclusive rights granted by a state (national government) to an inventor or their assignee for a limited period of time in exchange for a public disclosure of an invention. A patent allows the patent holder to exclude others from making, using and selling the invention for a period of twenty years from the filing of the non-provisional patent application.

Key Questions to Ask Prior to Filing a Patent Application

1. Has a literature search and patentability application been completed? Does it indicate that the invention is new and has not been invented or patented before?
2. Has a working prototype of the product that is to be covered under the patent been made?
3. Do you have a realistic plan in place to develop, manufacture, market and sell the products that are covered by the claims of your patent?
4. Is the potential for financial return for the successful commercialization significantly greater than the cost of obtaining a patent? (A U.S. patent can cost upward of $30,000 to obtain.)
5. What is the market outlook for the technology once a patent has been issued?

Patentability

Diligent and thorough review of patent applications must be completed before submitting the application to a United States or International patent office. Most often, patent attorneys are retained for their expertise in this area. The role of a patent attorney is to assist, prepare, file and prosecute patents. Prior to filing, a seasoned patent attorney can help assist inventors in determining patentability based on the attorney's knowledge of the existing technology in the field, performing research and patent searching.

Statutory Classifications

- The statutory classifications are the categories identified by Congress as patentable subject matter, and are intended to cover *"anything under the sun that Is made by man."* The categories are:

  1. Processes include a new use of a known process, machine, manufacture, composition of matter, or material.

  2. Machines are tangible items, and consist of parts, certain devices, or combinations thereof. Machines include every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result.

  3. Articles of manufacture are any articles, suitable for some use, that have been produced from raw or prepared materials that have been given new forms, qualities, properties, or combinations thereof.

  4. Compositions of matter are compositions of two or more substances and all composite articles, whether they be the results chemical union, or mechanical mixture, or whether they be gases, fluids, powders or solids.

- Non-patentable subject matter include abstract ideas or their manipulation, laws of nature, and physical phenomena

- Business methods *are* theoretically patentable, but the supporting law is unclear and has been disputed in court in the recent years. Additional case law is needed for clarification.

Utility

- Establishing utility is usually straightforward; the invention has to be useful, functional, moral, beneficial and operate as intended.

- Examples that *do not* meet the requirement are isolations of chemical intermediates (no known use), perpetual motion machines and time travel devices.

Novelty

Prior art searches ensures invention originality. Similar inventions are usually incorporated in the description of the patent application to distinguish the difference, and/or improvement of the invention. The most valuable part, the **claims**, must be described in precise language, of what has been invented. A patent examiner will review the language and validity of each claim as they are essential to protect the scope of the invention. If a claim is found in prior art, such as, a previous patent, it will be denied. If it is denied, it can be argued/rewritten to specify originality (see "Office Actions" in "Examination by USPTO" (United States Patent and Trademark Office) section of diagram on the next flap).

Non-Obviousness

- Can a person of ordinary skill, in the "art of the invention", develop the same solution given the available prior art? If the answer is yes, then the in invention is obvious and therefore NOT patentable.

- In order to be non-obvious, the invention must not be obvious in light of the prior art. Specifically, the following must be determined: the scope and content of the prior art; the level of ordinary skill in the art; the differences between the claimed invention and the prior art; and whether there is any objective evidence of nonobviousness. Some examples of non-obviousness are: new discoveries; combinations of known technology leading to unexpected results; and inventions which are opposite to common knowledge.

- An invention may be found obvious if all of its elements can be found in the prior art, and there is also some teaching, suggestion, and motivation to combine the prior art references in order to come up with the solution provided by the invention.

See depiction of patent process on the next flap