

*Success 20/20*



Rensselaer

# *Intellectual Property...*



***Make Sure it is Protected!***

## ***What is Intellectual Property?***

- Legal rights to non-tangible products of the human mind or intellect.
- Includes:
  - Patents
  - Copyrights
  - Trademarks
  - Trade Secrets
  - Know-how

## **Patents**

- **Patents are a contract between the federal government, on behalf of the public, and the inventor(s) for a time-limited monopoly**
- **Patents are issued by the U.S. Patent & Trademark Office, which is part of the Department of Commerce**
- **Patents foster innovation by balancing incentives for inventors and investors with public disclosure of new and useful advances**
  - **A time-limited right to exclude competitors from using patented inventions rewards inventors and investors.**
  - **Publication of patents disseminates technological advances and spurs future innovations.**
- **The patent system requires disclosure which promotes further innovation**

## Patents

- Basis for creating patent system (same basis for copyrights) is in US Constitution (Art. 1, Sec. 8)
  - “The Congress shall have power to . . . promote the progress of science and useful arts by securing for limited times to . . . inventors the exclusive right to their . . . discoveries.”
- US patents are enforceable only in the US, its territories and possessions, but can influence foreign activity that involves US importation and exportation
- Inventions covered by patent applications must satisfy standards for patentability
- Patent applications are subject to rigorous examination to insure standards of novelty, non-obviousness and utility are met

## ***Patent Law - Types***

- **Utility patents**
  - Cover a combination of elements, a set of process steps or a product made by a specified process
- **Design patents**
  - Cover ornamental appearance of an article that is separable from its functionality
- **Plant patents**
  - Cover certain types of plants

## ***Patents***

- **Patents give owner the exclusive right to exclude others from making, using, offering for sale, selling and/or importing that which is covered by the claims of the patent.**
- **Patents do not give you the right to practice your invention**
  - **You may not be able to utilize your invention if a dominating patent is owned by another, without a license from the owner of that patent**
- **Patent term is now 20 years from date of filing assuming all applicable fees are paid for utility patents (or 14 years from the date of issue of design patents)**
- **Only U.S. federal government issues patents in this country; no state patent system**
- **Patents are neither necessary nor sufficient for marketability.**

## ***Patentable Subject Matter***

- **Machines**
- **Articles of manufacture**
- **Composition of matter**
- **Processes**
  - **Covers method of making or using something**
  - **Covers software where the process is tied to a particular machine or transforms a particular article**
  - **Business methods are subject to same rules as other processes**

## ***What Can't Be Patented***

- **Abstract ideas**
- **Laws of nature or fundamental scientific principles**
- **Products occurring in nature**
- **Atomic weapons**
- **Illegal devices**
- **Mathematical algorithms and computational procedures (in the absence of an actual application)**
  - **For an invented process to be patent-eligible (such as a business method) it must either be “tied to a particular machine or apparatus,” or “transform a particular article into a different state or thing,” referred to as the “machine or transformation test.” *In re Bilski*, 545 F.3d 943 (2008)**

## *Patent Requirements*

- **“First to Invent” Rule – US Patents**
  - Congress is considering eliminating the “first to invent” rule in favor of the “first to file” rule used in most of the world.
- **Interference proceeding may be needed to determine who invented first**
  - Date of Conception
  - Date of Reduction to Practice
  - Inventors lab notebooks are critical to proving first invention
    - Use permanently bound notebooks
    - Sign and date notes and sketches
    - If possible, have a witness countersign (learned witness)
    - Record discussions from lab meetings
    - Note ideas or suggestions made by others and document their names

## *Patent Requirements*

- **Public disclosure of invention, or selling or offering to sell the invention (before filing a patent application)**
  - Prohibits foreign filings – international rights are lost
  - Starts a 1 year clock for a US filing, after which filing is barred
  
- **File for patent protection or obtain a Confidential Disclosure Agreement before**
  - Publications
  - Presentations
  - Web Postings
  - Corporate Proposals

## ***Patent Prosecution***

- **Domestic**
  - Provisional Applications
  - Full Application
  - Divisional Applications, Continuations, Continuations in Part, etc.
  
- **Foreign**
  - Patent Cooperation Treaty (PCT)
  - TRIPs and GATT

## ***The Patent Application Process***

- **Provisional Application Process – Quick & Cheap**
  - Only a place holder (1 year) and establishes a priority date
- **Non-Provisional Application Process - Expensive & Long (3-5 Years)**
  - Must disclose and describe the best mode contemplated by the inventor of carrying out the invention
  - **Specification (Technical):** Background, Summary, Description of Drawings, and Detailed Description of Invention.
  - **Claims:** *“Define the metes and bounds of the parcel of IP the inventor seeks to own.”*

## ***Patentability – Novelty & Utility***

### ■ **Novelty**

- The invention must be new and novel, with respect to what's described in publicly available publications or products (the "prior art"). However, only the "new" or improved portion of an invention must be novel. For example, new uses of known processes, apparatus, compositions of matter and materials can be patentable. Further, incremental improvements of a known machine or process would also be patentable if they satisfied the other two conditions.

### ■ **Utility**

- The invention must be useful and have some application or utility for users.

## ***Patentability – Non-Obviousness***

- **The invention cannot be obvious to a hypothetical person having "ordinary skill" in the field of the invention**
  - **Non-obviousness may be shown through inventor or expert affidavits or by pointing to surprising or unexpected results**
  - **Three prong test for determining non-obviousness is set forth in Supreme Court case *Graham v. Deere*, 383 U.S. 1 (1966)**
    1. **Scope and content of the prior art**
    2. **The level of ordinary skill in the art**
    3. **The differences between the claimed invention and the prior art**
  - **Supreme Court case, *KSR v. Teleflex*, 550 U.S. 398 (2007), held, among other things, that assessing whether an invention is obvious is a question of "common sense." Although the implications have yet to be fully realized, *KSR* will likely raise the bar for patentability.**

## ***Patent Ownership***

- **In the US, patent applications must be filed in the name of the actual inventors, although the companies they work for are usually assigned ownership rights as a condition of employment**
  - **General rule is that employer owns the invention if it's made within the scope of the employee's job duties**
  - **Employers can also get "shop rights" to an invention if it was conceived or reduced to practice using the employer's time or resources , even if outside the inventor's scope of employment**
- **Inventors can be entitled to a partial share in the proceeds from the sale or license of an invention if their employer has established such a program**

## ***Patent Inventorship***

- **Inventors are only those who conceive of the ideas embodied in the claims of the patent**
  - **Conception is the formation in the mind of the inventor(s) of a definite and permanent idea of the complete and operative invention**
  - **Colleagues, mentors, advisors, department chairs, students and research assistants are not co-inventors unless they conceive of part of the claimed invention**
  - **If claims are dropped or rejected during patent prosecution, inventorship may change, as certain inventors may have contributed only to certain claims**
- **Incorrect designation of inventorship could result in patent invalidity or unenforceability of claims**

## ***Patent Inventorship***

- **Legal inventorship  $\neq$  authorship of a journal article**
  - **Discovering, defining, or discussing a problem is not inventorship, nor is suggesting a desired result without conceiving of the corresponding idea or solution**
  - **Assisting inventor in reducing the invention to practice is not inventorship, nor is contributing obvious elements and/or improvements**
  - **Providing the inventor with well-known principles or explaining the state of the art is not inventorship**
  - **Evaluating the invention, or carrying out experiments or following instructions to confirm that the invention works is not inventorship**

## ***Copyright Law Protects***

- **Literary works**
- **Musical works and accompanying words**
- **Dramatic works and accompanying music**
- **Pantomimes and Choreographic Works**
- **Pictorial, graphic and sculptural works**
- **Motion pictures and other audiovisual works**
- **Sound recordings**
- **Architectural works**

### **Also:**

- **Compilations**
- **Derivative works**



## ***Not Protected by Copyright***

- Facts or ideas
- Names, titles, slogans or short phrases
- Works that are solely utilitarian or functional
- Merger doctrine
- Works created by U.S. government employee within scope of employment
- Works in public domain

## ***Copyright – Requirements & Rights***

- **Requirements**
  - Original work of authorship
  - Fixed in a tangible medium of expression (i.e., paper, CD, DVD)
  
- **Exclusive Rights**
  - Reproduction
  - Modification – right to prepare derivative works
  - Distribution
  - Performance
  - Display

## ***Copyright Ownership***

- **Author owns the work**
- **Work made for hire exception**
  - **Employees**
  - **Independent contractors for specially ordered or commissioned works**
- **Joint ownership**

## ***Terms of Protection***

- **Works created after 1978 and first published in the US**
  - Life of author plus 70 years
  - For corporations, 95 years from publication or 120 years from creation, whichever expires first
- **There are many special conditions for earlier works, as well as different rules for unpublished works and for works first published outside the US**
- **For more detailed information visit**  
[http://www.copyright.cornell.edu/public\\_domain/](http://www.copyright.cornell.edu/public_domain/)

## ***Copyright - Best Practice***

- **Add copyright notice to all works that are created**



*(Date of Creation) (Author's Name)*

- **Register with U.S. Copyright Office within three (3) months of publication to obtain Attorney's fees and Statutory damages (Presumes ownership and need to be registered to bring suit)**

## **Trademark**

- Any word, phrase, symbol or devices used to identify and distinguish goods and services from those manufactured and sold by others (it must have acquired secondary meaning)
- Service Mark – Same definition, except used to describe services rather than goods.
- Trademarks operate on a “first to use in commerce” basis, which must be proven to determine rights in the case of competing marks
- Trademarks exist both at the state and federal levels
  - In a state issued there is no background check to compare with competing marks, there is only a record of who has registered
  - At the Federal level a mark has greater scope of protection and also enjoys greater supremacy over state trademarks. The PTO completes a search on competing marks to avoid infringement



# Evaluating Strength of Trademarks

The More Distinctive, The Stronger the Mark

Strongest.....Weakest .....Not Protectable

Coined/Arbitrary	Suggestive	Descriptive (Merely or Geographically)	Generic
Kodak	Advair	Manhattan Bagel	Aspirin
Exxon	Igloo	General Motors	Advil
Priolosec	Southern Comfort	Sonoma Valley Wine	Thermos
Centrium	Nautica	International Business Machines (IBM)	Kleenex

(Acquired distinctiveness through use)

## ***Generic = Unprotectable***

- **Convenient Food Mart, Supermarket**
- **Once were Trademarks:**
  - **Aspirin, Escalator, Cellophane, Linoleum, Kerosene, Thermos, Yo-Yo, Bikini**
- **Famous marks risk becoming generic**
  - **Scotch Tape, Kleenex, Xerox, Advil**
- **Grave Yard of Generic Marks: Dictionary**



## ***Trademark Best Practice***

- **Use TM or SM designation now**
- **Must use trademark in commerce to qualify for registration**
- **Posted Federal Registration – use ®**
- **Do not use trademark as a noun, but as an adjective**
  - **Band-Aid® Brand Adhesive Strips**
  - **Visa® Credit Card**

## *Examples of Types of Trademarks*

- **Words**
- **Slogans/Phrases**
- **Symbols/Devices**
- **Color**
- **Trade Dress**
- **Other miscellaneous marks**
  - **Characters**
  - **Personal names**
  - **Celebrity's name (distinguish right of publicity)**

## Trade Secret

- Trade secret law prevents those who are under a legal duty from disclosing trade secrets and other confidential and proprietary information to any third party who does not have a right to know the information
- A "trade secret" is:

*Information, including a formula, pattern, compilation, program device, method, technique, or process, used, or if not used, intended for use in a trade or business, that: (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.*

## ***Trade Secret***

- **A trade secret is any information used in a business that has commercial value and gives the business owner a competitive advantage**
  - **Examples of trade secrets: formula, device, compilation of data such as customer lists or source code**
- **Trade secrets are protected under state law; there are no federal trade secret laws**
- **Employees cannot use employer's trade secrets for their own benefit, nor can third parties**

## ***Trade Secret***

- **To retain status as a trade secret, reasonable means must be taken to maintain secrecy**
  - **Unlike patents and trademarks, trade secrets are only protected when they are not disclosed**
- **Owner runs the risk that trade secrets can be discovered by third parties by fair means (e.g., reverse engineering)**
- **Third parties that misappropriate trade secrets by unfair means (e.g., industrial espionage) can be liable under state laws, provided the owner has taken reasonable precautions to protect trade secret.**

## *Other Statutes and Laws*

- **Anti-cyber-squatting Consumer Protection Act**
  - 15 U.S.C. 1125(d) – makes it unlawful to register, traffic in or use in “bad faith” a domain name that is identical, confusingly similar to or dilutive of another’s trademark or personal name
  - Creates a right to sue in federal court
- **Uniform Domain Name Dispute Resolution Policy**
  - [www.icann.org](http://www.icann.org)
  - Provides a similar right, but may be enforced through compulsory arbitration proceedings

## ***Intellectual Property Resources***

### **Learn More about IP:**

- **USPTO Inventor Resources:** <http://www.uspto.gov/web/offices/com/iip/index.htm>
- **WIPO Guide to World IP:** <http://www.wipo.int/about-ip/en/ipworldwide/index.html>
- **Cornell Legal Information Institute:**  
[http://topics.law.cornell.edu/wex/category/intellectual\\_property](http://topics.law.cornell.edu/wex/category/intellectual_property)

### **Avoid Invention Promotion Scams:**

- **USPTO:** <http://www.uspto.gov/web/offices/com/iip/documents/scamprevent.pdf>
- **InventorEd:** <http://www.inventored.org/>
- **National Inventor Fraud Center:** <http://www.inventorfraud.com/>

## ***Resources for Patent Searches***

- Google Scholar: <http://scholar.google.com/>
- Google Patents: [www.google.com/advanced\\_patent\\_search](http://www.google.com/advanced_patent_search)
- Free Patents Online: [www.freepatentsonline.com/](http://www.freepatentsonline.com/)
- International Patent Applications: [www.wipo.int/pctdb/en/index.jsp](http://www.wipo.int/pctdb/en/index.jsp)
- USPTO Databases: <http://patft.uspto.gov/>
- USPTO Public PAIR: <http://portal.uspto.gov/external/portal/pair>
- SumoBrain: <http://www.sumobrain.com>

## ***Resource for Trademark Searches***

- USPTO Trademark Searches [www.uspto.gov/main/trademarks.htm](http://www.uspto.gov/main/trademarks.htm)

## Guidelines for Student Created IP at Rensselaer

### General Principles:

- ***Students at Rensselaer are obligated under Rensselaer's Intellectual Property (IP) Policy to:***
  - 1) ***Immediately disclose to RPI's OTC any IP they own or already have a license to;***
  - 2) ***Maintain a researchers notebook documenting the IP they innovate and reduce to practice;***
  - 3) ***Submit a written disclosure of their innovations to the OTC as soon as practicable; See:***  
***([http://www.rpotechnology.com/files/invention\\_disclosure\\_form.doc](http://www.rpotechnology.com/files/invention_disclosure_form.doc))***
  - 4) ***Support the ownership and protection of Rensselaer IP including the execution of documents necessary to effectuate that IP ownership and protection.***



## Significant Use of Rensselaer Resources defined:

- *Any use of Rensselaer personnel or facilities that is not exempted by this Policy, including:*

*Space, funds, equipment, facilities or services, employee on-the-job time, laboratories, computers, software, paid student time, (e.g. research assistants, teaching assistants, fellows, students who provide services under sponsor agreements that require Rensselaer ownership) attending, participating in or benefiting from a Rensselaer course, the supervision of a faculty or staff member, confidential information or Rensselaer-owned Intellectual Property (such as Tangible Research Property (TRP)), Rensselaer organized software development projects or recordings of presentations of Course Materials.*



## Ownership of Intellectual Property:

- ***Creator-Owned IP is IP that is/was Not:***
  - 1) ***subject to a sponsored research or other agreement requiring ownership to reside in some other party including Rensselaer; and***
  - 2) ***conceived, created, developed, or first reduced to practice with Significant Use of Rensselaer Resources; and***
  - 3) ***conceived, created, developed or first reduced to practice as a direct result of his/her duties at Rensselaer.***
- ***Rensselaer-Owned IP is that which was conceived or reduced to practice under conditions that are opposite to those listed above.***



- ***What are the benefits that innovative students receive?***
  1. ***Education in the innovative process and in the protection of intellectual property.***
  2. ***The decision by the Institute of the ownership of the IP that was conceived and reduced to practice while at Rensselaer. (i.e. clear title if IP is not owned by RPI)***
  3. ***Access via licensure to IP that is legally owned by Rensselaer if you wish to obtain it for your own entrepreneurial startup.***
  4. ***RPI guarantees that the student innovator will share in the benefits, if any, that result from the successful commercialization of the IP that they develop:***
    - ***Creators receive 35% of the net adjusted proceeds resulting from successful commercialization;***
    - ***Academic School receives 15% of the net adjusted proceeds;***
    - ***Institute receives 50% of the net adjusted proceeds and uses those funds to support research and education at RPI.***
    - ***Courses funded by the NCIIA Grant, such as Inventor's Studio, may have a different distribution of net adjusted proceeds. The faculty member responsible for your course will notify you if their class is supported by an NCIIA grant.***

*Success 20/20*

*A way to think ...*

*A way to learn ...*

*A way to succeed.*

Rob Chernow  
Vice Provost

*"Intellectual Property – Make Sure it is Protected", was compiled by RPI's Office of Technology Commercialization, April 2009 with the able assistance of the Heslin, Rothenberg Farley & Mesiti P.C. Intellectual Property Law Firm.*

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