Fundamentals of Intellectual Property

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Objectives

This module presents the fundamentals of intellectual property, including the following topics:
(1) Definition of Intellectual Property (IP)
(2) Importance & far-reaching effects of IP
(3) Rights reserved to the rightful IP owner
(4) Increasing importance of University's role in IP

Why are we here?



Why are we here?

Intellectual Property (IP) is

- A tool to foster innovation
- playing a key global role in developing technologies for the next century.
- IP issues arise in many common transactions
- People here and abroad have increasingly come to view innovation as critical to national economic wellbeing

What is Intellectual Property?

- Intellectual Property (IP) refers to creations of the mind:
 - Inventions and discoveries;
 - Literary and artistic works;
 - Symbols, names, images, and designs used in commerce; and
 - Any type information that has economic value and competitive advantage to its owner, while is kept secret

Intellectual Property Law

The field of law which defines

- The type of creations that are entitled to protection as IP
- How to obtain, lose and mantain those intellectual property rights (IPR's)
- How to properly use and benefit from those rights
- How to obtain enforcement and compensation when your IPR's are infringed
- Also...
 - Provide guidance to a competitor or other person who desires to invent a new product or use a new process by "designing around", to avoid possible infringement.

Policy Considerations

- □ IP seeks to benefit the general public by providing a rich, diverse, and competitive marketplace
- Most IP doctrines are crafted to balance two potentially conflicting public goals:
 - 1. To provide an incentive to create by giving the creators property rights in the products of their creativity, and
 - 2. To provide the greatest possible public access to products of creativity in order to promote a competitive marketplace.
 - 3. To encourage and further the development of technology.

Jurisdiction

Article 1, Section 8, Clause 8 of the U.S. Constitution

"The Congress shall have power to...promote the progress of science and useful arts, by securing for **limited times** to <u>authors</u> <u>and inventors</u> the exclusive right to their respective <u>writings</u> <u>and discoveries</u>..."

- Based on this Constitutional provision, patents and copyrights are of limited duration and governed almost exclusively by federal law
 - On the contrary, Trade Secrets are theoretically unlimited in duration and governed mostly by state law

Intellectual Property Law

- Under intellectual property law, owners are granted certain <u>exclusive rights</u> to a variety of intangible assets, such as
 - □ ideas, discoveries and inventions;
 - musical, literary, and artistic works; and
 - words, phrases, symbols, and designs.
- The law grants property-type protection to these non-tangible creations and inventions
 - The protection of the law gives the creator/owner the <u>exclusive ability</u> to control, and profit from the results of this creativity

Intellectual Property Process

Source: John Calvert, USPTO

Types of Intellectual Property

The buildings blocks of IP are:

Patents

Copyrights

Trademarks

Trade Secrets



PATENTS

Patented Products

Can you identify a patented product on this desk?



Source: John Calvert, USPTO



Patents

What is a Patent?

- A statutory privilege granted by the <u>federal</u> government;
- To an inventor or persons deriving their rights under the inventor;
- For a fixed period of time;
- To exclude other persons from using, manufacturing, selling or using a patented product.
 - Because one or more patents may cover aspects of the same item.

Patents

- A Patent seeks to promote the progress of science by protecting, for a limited time, what US Constitution broadly calls the "discoveries" of the "inventors"
 - Is a Quid Pro Quo System: invention must be described in detail
- Jurisdiction: The body of law that deals with patents are found at Title 35 of the United States Code (USC) by virtue of the US Constitution, and define
 - What can/cannot be patented
 - Conditions and requirements for obtaining a patent
 - Rights granted
 - Enforceability of patents rights
 - Licensing and transfer of ownership of the IPR's for monetary consideration.

Patents

Must be registered to exist.

For how long?

- 20 years from the filing date of the patent application covering the invention/discovery (for utility and plant patents)
 - Subject to periodic maintenance fees
- 14 years from the issuing of a patent (for design patents)

Patentable Subject Matter

- Patents are granted to "new and useful" inventions
 - Processes and Methods (i.e. chemical, mechanical, electrical, or a business method of processing data if it uses computer assisted implementation or it physically transforms an article)
 - Machines (i.e. mechanisms with moving parts, such as a motor)
 - Articles of manufacture (man made products, such as a hand tool)
 - Compositions of matter (chemical compounds, combination of mixtures)
 - or any improvements thereof
 - New uses
- What can not be patented: laws of nature, abstract ideas, algorithms (?)



Types of Patents

<u>Utility</u>:

New and useful process, machine, article of manufacture, or composition of matter, or any New and useful improvement thereof → How an invention works





<u>Design</u>: New, original & ornamental design → How an invention looks

Plant: Asexually-reproduced distinct and new variety of plant

Patentability Requirements

- The invention must be useful and work for its intended purpose
 - Must not be inoperable (perpetual motion)
 - Subject to post-grant cancellation if proven to be inoperable
 - Need not to be superior in performance
 - Proof of utility may be required
- The invention must be novel and non-obvious compared to the prior art

Novelty (§102)

- Patented of known by others before your invention
- In public use, on sale or described in a printed publication more than a year before filing patent application
- Earlier invented by another who had not abandoned, suppressed or concealed the invention
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Novelty destroying disclosures

- Scientific publications
- Meetings presentations/abstracts
- Personal website
- Funded grants (abstracts)
- Non-confidential discussions with 3rd parties can be problematic
- Public use

Non-obviousness (§103)

- The non-obviousness requirement comes into play <u>only</u> when the claimed invention is not identically disclosed or described in the prior art, either structurally, or functionally, or both.
- Obviousness means that the invention is different from prior art, but the differences are so trivial as to be "obvious to one of ordinary skill in the art"
- Requirements are
 - a teaching of each element in the prior art;
 - A suggestion or motivation in the prior art to combine elements
 - modify the prior art to arrive at the invention, and
 - a likelihood of success in making and using the invention

Assessing when/whether and how to file

Determining when/ whether to file

- Scope of Coverage
- Stage of development
- Quality of data
- Commercial relevance

"One year rule"

- Provisional filing
- One year to fully develop all relevant data

Patentability Assessment

- Search and expert opinion
- On-line searches

Types of Applications

Provisional:

- One year period
- Filed for filing date priority
- No claims required
- Not examined
- Not allowed for design

Non-Provisional:

- 20-year patent protection from filing date
- Examined for patentability
- Claims required

Costs of Patent Protection

U.S

- Overall costs depends on complexity of the invention, scope, sought, closeness of prior art, etc.
- Average cost to prepare and file initial application between \$8K to \$12K
- Issuing about \$10-15K more

Abroad

- Can be very expensive
- Average cost to file in all major industrial countries (i.e. Europe, Japan, Canada, etc.) about \$50K to \$100K+

Patent Ownership

- Inventors are the default/initial owners
- Employers generally include assignment obligations as a condition of employment
- U.S Government rights must be noted in the patent application

Patents and Universities



Source: John Calvert, USPTO

Whose property it is?

- Under UPR's policy (Cert. 132, 2002-03) the University owns intellectual property that is generated through <u>research</u> conducted with the use of its facilities and resources.
- All royalties and most fees resulting from the intellectual property are shared between UPR and the individuals involved in its discovery.
 - □ 33 1/3 % inventor(s)
 - □ 56 2/3% inventor's UPR unit(s)
 - 10% UPR special fund
 - Any remaining amount will be used to support additional research and academic programs.

Who decides what gets protected?

- UPR's Vice President for Research and Technology makes the final decision as to whether to file a patent application or seek another form of protection
 - With the recommendations made by:
 - the patent attorney or patent agent
 - the UPR Office of Intellectual Property and Commercialization, and
 - □ IP-TTO (in the case of UPRM inventions)

Ideas for you ideas



Collegiate Inventors Competition http://www.invent.org/collegiate/





The Lemelson-MIT Awards for Invention and Innovation <u>http://web.mit.edu/invent/a-main.html</u>

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COPYRIGHTS

- A Copyright seeks to promote literary and artistic creativity by protecting, for a limited time, what US Constitution broadly calls the "writings" of the "authors".
- Jurisdiction: The body of law that deals with copyrights are found at Title 17 of the United States Code (USC) by virtue of the US Constitution.

What is a Copyright?

Original "works of authorship" fixed in a tangible medium of expression from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.

The work of authorship must

- not be copied from another source
- not be so elementary that it lacks sufficient creativity to be copyrightable

- A copyright protects particular expressions of ideas, not the ideas themselves.
- Protection is automatic, there is no requirement of publication or registration, like patents and trademarks.
- For how long?
 - Sole author = life + 70 yrs.
 - □ Joint authors = life + 70 yrs of last surviving author.
 - For WMFH, anonymous and pseudonymous works = 120 yrs from the date of creation or 95 yrs from the date of publication, whichever occurs first.

- Copyrightable works include:
 - Literary, musical and dramatic works;
 - Pantomimes and choreographic works;
 - Pictorial, graphic and sculptural works (including the non utilitarian design features of useful articles);
 - motion pictures and other audiovisual works;
 - Sound recordings;
 - Computer programs;
 - Certain architectural works; and
 - Compilations of works and derivative works.

- Copyright Law gives the Copyright owner a Bundle of Rights to exclusively
 - reproduce the work;
 - distribute the reproductions (by sale or otherwise);
 - display or perform the work publicly
 - prepare derivative works, and
 - to authorize other to do any of these things

TRADEMARKS









- A trademark is a device which can take almost any form, as long as it is capable of identifying and distinguishing specific goods or services.
 - A word, name, or a phrase, a symbol, logo, product/container shape or device (or any combination thereof) used to identify a particular manufacturer or seller's products/services and distinguish them from the products/services of another (15 USC §1127)
- Types of devices available: Letter and words; Logos; Pictures; a combination of words and a logo; Slogans; Colors; Product shapes, and sounds

Trademarks include:

- Brand Names
 - goods (i.e. Dole for canned pineapple)
- Trade Dress
 - consisting of the graphics, color, shape of packaging (i.e. Coca-Cola bottle)
- Service Marks
 - services (McDonalds for a service restaurant)
- Certification Marks
 - goods or services meeting certain specified qualifications ('Hecho en PR')
- Collective Marks
 - goods, services or member of a collective organization (i.e. IGFA)

Jurisdiction

- Trademarks are governed by both state and federal law.
 - Every state has its own trademark law that adequately protects the users of just intrastate marks.
 - The main federal statute is the Lanham Act, enacted in 1946 and most recently amended in 1996 (15 USC 1051, et seq.).
 - Law No. 169 of December 16, 2009, as amended, known as Trademark Law of the Government Puerto Rico of 2009

Registration:

- Multiple trademark protection: common law rights, state registration and federal registration
- A trademark can have all three types of protection.

Purpose of Trademark Law:

- Avoid the likelihood of confusion in the consumers about the source, sponsorship, or affiliation of goods or services.
- Protection of the goodwill and reputation of the manufacturer of a product or the service provider.

Functions of Trademarks:

- Identification
 - To identify one seller's goods and distinguish them from goods sold by others
- - To <u>signify</u> that all goods bearing the TM come from, or controlled by a <u>single source</u>.
- Quality
 - To indicate that all goods bearing the TM are of an equal level of auality (whether that level is high, low, or a particular quality desired by customers, such as reasonably priced, no-frills motel chain, etc.).
- Advertising
 - □ To <u>advertise</u>, <u>promote</u>, and generally <u>assist in selling</u> the goods.



Trade Secrets

The oldest form of IP protection.

- The law of trade secret may be applied to almost any secret which is used in business and gives its owner a competitive edge over others who do not know or use it.
- No federal trade secret statute. Trade Secrets laws are determined by state laws.
 - Ley para la Protección de Secretos Comerciales e Industriales, Ley Núm. 80 de 3 de junio de 2011

Trade Secrets

- Used to protect important business information that a business does not want to disclose to the publichas economic value and provides a competitive advantage
- Does not have to be novel or non-obvious
- Effective only if kept confidential
 - Do not release trade secrets without a nondisclosure agreement
 - Always place appropriate marking on trade secret information (e.g., Proprietary Information, Not for Public Release)
 - Take active measures to protect

Trade Secrets

Last indefinitely as long as they are kept secret

However, if independently developed by another, the protection can be lost

Secrecy is the most important aspect of this type of protection.



WHAT KIND OF INFORMATION QUALIFIES AS A TRADE SECRET ?

May consist of any formula, pattern, process, method, technique, device or compilation of information which is used in one's business that is sufficiently valuable and secret to afford an actual of potential competitive economic advantage to its owner.



Examples of Trade Secrets

- Technical and scientific information
- Business plans & strategies
- New product names
- Financial projections
- Marketing plans, unpublished promotional material
- Cost & pricing information
- Sales data
- Customer lists
- Info re: new business opportunities
- Personnel performance
- Negative information

Famous Trade Secrets



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Questions?

THANK YOU!!!