Intellectual Property Overview

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Intellectual Property

Inventions

Brand Names

Secret Formulas

Content on Websites

Movies

Intellectual Property refers to creations of the mind
Types of Intellectual Property

- **Patents**
  - Inventions

- **Trademarks**
  - Identify source of a product or service

- **Copyrights**
  - Expressions of ideas

- **Trade Secrets**
  - Secret information with commercial value
What is a Patent?

- Limited property right to exclude others from making, using, or selling an invention.

- Does not give the right to practice your invention.
What is a Patent?

Key to Patent Rights = BALANCE

- Full Disclosure to the Public
- Limited Monopoly Right
Types of Patents

- **Utility Patents**
  - Protect the way an invention works
  - 20 year term from filing date
  - Provisional and Non-provisional applications

- **Design Patents**
  - Protect ornamental appearance
  - 15 year term from issue date

- **Plant Patents**
  - Protect new varieties of asexually produced plants

**FIG. 1**
Apple Design Patent No. D593,087

**FIG. 2A**
Apple U.S. Patent No. 8,551,283
Why Protect Your Inventions

• Showcase your technology
  ♦ Asset when looking for funding
  ♦ Critical factor in obtaining funds for investors
• Block your competition
• Protect an area of research while you identify a product
• Licensing revenue
• Source of recognition for the inventor
• Stimulates innovation and economic growth by protecting investment
Provisional Patent Application

- Provides filing date
  - A “placeholder”

- No patent rights—not examined

- Abandoned automatically after one year

- Has simpler filing requirements
  - Claims are not required

- Lower filing fees

- Patent pending once application is filed
Typical Patent Filing Strategy

Provisional Application

Non-provisional Application
(Not later than 1 year after the provisional application filing date)

International Application
(Not later than 1 year after the provisional application filing date)

National Stage Applications

Issued Patent(s)
Patent Prosecution

1. File Non-provisional Application
2. Restriction Requirement if more than one invention claimed
3. Office Action (about 17 months from date of filing)
4. Response to Office Action
5. Examiner Interviews
6. Notice of Allowance
7. Pay Issue Fee
Parts of a Patent Application

♦ Specification
   – Must provide sufficient information to allow one skilled in the art to make and use the invention

♦ Claims
   – Define the invention being protected

♦ Drawings
   – Required if necessary to understand the invention
What Can Be Patented?

“... anything under the sun that is made by man.”

What Can Be Patented?

♦ Anything new and useful

♦ Methods, Machines, Compositions of Matter, Manufacture

♦ Mathematical algorithms, laws of nature, and ideas? – No
Requirements for Patentability

Utility

Novelty

Non-Obvious

Description/Enablement
Requirements for Patentability

• Utility: invention must be useful

• Novelty: not already known

• Non-Obvious: must not be obvious to a person having ordinary skill in the art

• Invention must be described and enabled in the application
Prior Art

♦ Information or knowledge publically available before the filing date of the application

♦ Printed Publications
  – U.S. patents and published applications
  – foreign published patent documents
  – poster presentations
  – handouts at meetings
  – abstracts
  – material posted on the internet
  – articles, books
  – thesis or dissertation
Prior Art

♦ “Otherwise Available to the Public”
  – Oral Presentation
  – Lecture or speech
  – Demonstration at a trade show

♦ The public disclosure must be enabling
Exceptions / Grace Period

♦ United States
  – One year grace period

♦ Most foreign countries/regions (for example: Europe)
  – Absolute novelty
Common Pitfalls

♦ U.S. is now a First to File country

♦ In the former First to Invent system, A receives the patent because A invented first; however, in a First to File system B receives the patent because B filed the invention first.

♦ A receives the patent if A can show that B obtained the invention from A.
Common Pitfalls

♦ If the inventor allows other people to know about the invention before a patent application is filed, the inventor may lose his/her patent rights.

♦ Do not disclose the invention without an executed confidentiality or non-disclosure agreement.

♦ General rule: No public disclosure until a patent application is filed.
Laboratory Notebooks

♦ Serve to document critical dates

♦ Establish rights in derivation proceedings

♦ Establish exceptions to prior art rules

♦ Story of invention in litigation
Inventorship

- Determining who is an inventor is a legal determination

- The inventor must contribute to the conception of the invention

- Inventors are not the same as co-authors of a paper, students in a lab, or supervisors

- Wrong inventorship can invalidate a patent
Prior Art Searching

♦ Patent Office Search
  - www.uspto.gov

♦ Internet Searches
  - https://patents.google.com

♦ Library: text books, reference books, trade journals
Prior Art Searching

- Patent Office Search - www.uspto.gov
- Computer Searches - https://patents.google.com
- Library: text books, reference books, trade journals

Search for patents

New to Patent Searching? See this important information about searching for patents:

How to Conduct a Preliminary U.S. Patent Search: A Step by Step Strategy - Web Based Tutorial (38 minutes)

- The Seven Step Strategy - Outlines a suggested procedure for patent searching
- A detailed handout of the Seven Step Strategy with examples and screen shots.

Patents may be searched using the following resources:

- USPTO Patent Full-Text and Image Database (PatFT)
- USPTO Patent Application Full-Text and Image Database (AppFT)
- Global Patent Search Network (GPSN)
- Patent Application Information Retrieval (PAIR)
- Public Search Facility
- Patent and Trademark Resource Centers (PTRCs)
- Patent Official Gazette
- Common Citation Document (CCD)
- Search International Patent Offices
- Search Published Sequences
- Patent Assignment Search

USPTO Patent Full-Text and Image Database (PatFT)

Inventors are encouraged to search the USPTO's patent database to see if a patent has already been filed or granted that is similar to your patent. Patents may be searched in the USPTO Patent Full-Text and Image Database (PatFT). The USPTO houses full text for patents issued from 1790 to the present.

Searching Full Text Patents (Since 1976)

Customize a search on all or a selected group of elements (fields) of a patent.

- Quick Search
- Advanced Search
- Patent Number Search
Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Current Classification (US, IPC, or CPC).

When searching for specific numbers in the Patent Number field, patent numbers must be seven characters in length, excluding commas, which are optional.
Process of Technology Commercialization

1. Research
2. Invention Disclosure
3. Assessment
5. Identifying Potential Licensees
6. Licensing
7. Commercialization
Process of Technology Commercialization

Invention Disclosure

Assessment. Proceed?

Provisional Patent Application

Request additional information or waive to inventors

Assessment. Proceed?

Waive to inventors

Non-provisional Patent Application
### Assessment

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Disclosure Form

♦ Report your inventions via the NJIT Inventor Portal

https://njit-ip.ttoportal.com/Login.aspx

No patent rights after submitting the invention disclosure form
Trade Secrets

• Secret information with commercial value

• Reasonable degree of protection
  – Physical security, limited access to material, need to know

• Recipes or formulas, business plans, customer lists, manufacturing processes
  – The formula for CocaCola (secret for more than 125 years)
  – The recipe for KFC
Trade Secrets Versus Patents

• Available for as long as the information remains confidential
  – Patent protection generally lasts about 20 years

• Could be reverse engineered or independently discovered
  – A reason to pursue patent protection

• Cannot be disclosed to the public
  – Information is disclosed in a patent application
**Trademarks**

- Any word, name, symbol, design, sound, color, touch, smell, device

- Identify and distinguish a product or a service
- Trademarks are adjectives; **not** nouns or verbs
  - Ray-Ban sunglasses
- Trade name: company or business
  - Apple
- Trademark: identifies goods
  - iPhone
Selecting a Trademark

- Not distinctive, no protection
  - Generic (common names)
    - Soap
    - Phone
  - Descriptive (describes product)
    - Creamy
  - Suggestive (suggests products)
    - Playstation
  - Arbitrary (existing word but no relationship to product)
    - Apple computers
  - Fanciful (made up)
    - Exxon

- Most distinctive, full protection
Trademark Rights

- Federal Registration: ®
- Common law rights: TM or SM
- Could be indefinite as long as trademark does not become generic
- Advantages of Federal Registration
  - Evidence of validity and ownership
  - Nationwide
  - Right to sue in federal court
  - Incontestable after 5 years of continuous use
  - Damages for infringement
Copyright

- Protects original works of authorship
  - Literary
  - Musical
  - Artistic

- Originality: independently created

- Only minimal creativity required

- Exists upon fixation of work in any tangible medium
  - No registration required
Copyright Rights

• What can you do with a copyright?
  – Reproduce
  – Derivative works
  – Distribute copies
  – Perform publicly
  – Display publicly

• Only protects expression, not idea of underlying work
Copyright Term

• Generally life of author plus 70 years

• Work made for hire: 95 years from publication or 120 years from creation, whichever expires first
Copyright Registration

• Required to bring suit for infringement

• Statutory damages and attorney fees

• Actual or constructive notice
Overlapping IP Protection

♦ More than one form of IP protection may apply

♦ Patent
  – Design patent on the bottle shape
  – Utility patent on method of fortifying drinks with vitamins

♦ Trademark on bottle shape and Coke

♦ Copyright on advertising and promotion

♦ Trade Secret on the formula
Issues

• Contact us for any advice
  – IP@NJIT.edu

• For what types of IP protection does work quality?

• Who owns the IP?
  – Each IP can have a different owner
  – Review NJIT Patent Policy
  – Review your employment agreement

• Develop an overall strategy for IP from the start before the product is introduced