Technology Entrepreneur Center

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TE 250: Week 11 Intellectual Property

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Calendar

- Content Class (4): 4/13, 4/20, 4/27, 5/4
- Content:
  - Intellectual Property
  - Funding
  - Financial Projections/Statements
  - Pitching
- Final Presentations (2): 4/27, 5/4
  - 4/27: Sole Switch, Lexilens, TBD
  - 5/4: other 6 teams
- Remaining Assignments (2): 5/4 (T), 5/4 (I)

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Agenda

- Past Assignments
- Remaining Assignments
- Intellectual Property

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Mid Term Results

- Average score B (86%) - ~65/75
- Extra credit available:
  - Submit peer reviews of the other 8 teams
  - Use the Google Forms link I will provide on canvas
  - Include your NetID so I can give you credit
  - Must do a thorough effort on reviews, not just check the box.

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Individual Assignments – #6 Market Validation

Market Validation: This is an individual assignment.

Are there enough people who will care about the problem your team is trying to solve? If it's a small number of people, are the volumes and/or dollar values large enough to justify putting your time into this project?

Perform a market analysis for your technology. Use the TAM/SAM/SOM approach that was discussed in the week 7 slides. Also try to use both top down and bottom up approaches to make sure your numbers are congruent. If possible, validate with secondary market research data points (i.e., information found from reports). It's okay to use some assumptions, but be explicit that it is an assumption and not a referenced data point. This is a "back of the napkin" exercise. I'm less concerned with precision and more concerned with understanding that you can validate the problem.

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Due MAY 4

Final Assignments Teams – Team Pitches

Team Rubric (Peer Scoring)

This is **the group portion of the final project**. Each team will be given ~20 minutes. 10 minutes Pitch and 5-minute Q&A. Students will then be given 2 minutes to complete judging form. That will leave a couple of minutes for transitions, but each team needs to be ready to present as soon as their slot starts.

Presentation schedule

Class 14 (3 teams):

Class 15 (6 teams):

Teams are free to decide who presents but a minimum of 3 team members are required to present and all teams members should actively participate in the Q&A.

All students will individually score the other teams, so attendance is mandatory on both dates as is prompt attendance.

Q&A and Scoring: ~5 minutes

Q&A will be led by the team presenting and questioning will primarily come from the class. I may or may not ask any questions at all. Your individual active participation will be considered as part of your overall final participation grade. I will review all recordings before assigning final grades to ensure you are actively engaged in the questioning of your peers.

EXTRA CREDIT

In additional, each *student will anonymously score the other teams' presentations.* This is evidence of your ability to critically evaluate your peers' using topics learned in class.

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Due MAY 5

Individual Assignments – Persuasion

Your final individual assignment is to **persuade someone to support your effort**. You pick the target: recruit, investor, customer, etc. (make sure your intended audience is clearly identified or is obvious by the nature of your response). Make an argument to convince your target. **Be sure to support your case with things you've learned from working on your team project**, for example, solving customer pain, equity to early hires, or return for investors. **The format or medium is up to you.** A few examples include a recorded sales pitch or commercial that you upload to YouTube, a sample Kickstarter video, a Prezi, a cartoon, or a 1–2-page typed paper... Here's an example of a creative submission from a previous semester: https://youtu.be/eNrq9-sk6Nk

Use your imagination and make it compelling. Be creative and captivate your audience. Holding their attention is half the battle. It doesn't need to be long or elaborate, just convincing. Do what you think best supports your case and choose a medium in which you're confident. Take some risks. You have license to be creative and have fun with this!

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Due MAY 4

Individual Assignments – Peer Review

As part of your engagement and participation score and as part of your peer's engagement and participation score, complete the assessment of your teammates using this Google Form. You will have 100 points to allocate in some proportion to each of your teammates with some required commentary on their contributions.

Peer Form

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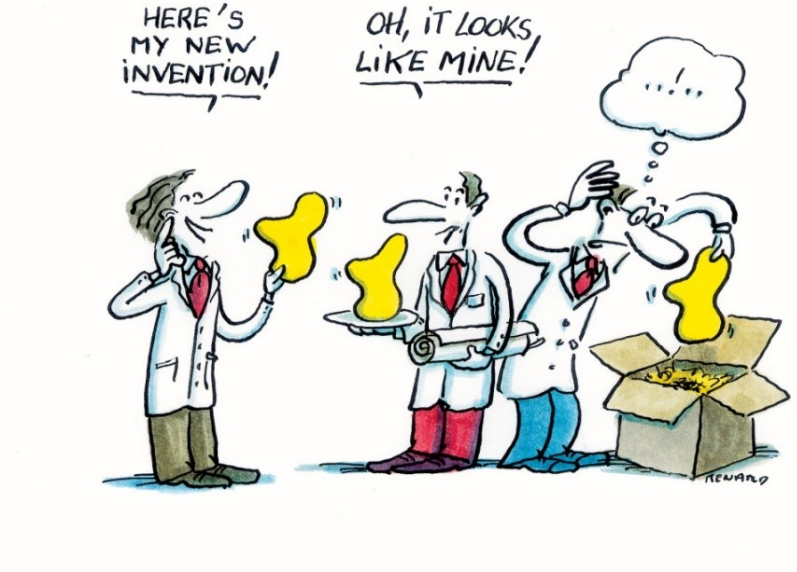
What is intellectual property (IP)?

Encompasses all forms of creativity:

- Inventions, discoveries, processes, know-how, show-how
- Unique materials, chemicals, biologicals, plants
- Original data and creative or artistic works
- Software, computer code



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Why care about IP?

- Often the most valuable assets of an early stage tech company
- All companies have intellectual property (IP)
- Not all companies have an IP strategy
- A significant portion of your business value is in the IP
- IP can help
  - Leverage investment
  - Exclude competition
  - Attract and enable licensing
- An IP strategy helps map a path to value creation and monetization

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Why care about IP?

- Job creation, grow sales, innovation
- Approval of 1st patent increases
  - Employment growth on average 36%
  - 51% increase in sales growth
  - 49% increase in number of subsequent patents granted
  - 27% higher citation on subsequent patents
- Increases probability of securing funding from professional investors
- Doubles probability that startup is eventually listed on a stock exchange

'The Bright Side of Patents' USPTO Economic Working Paper 2015-5, Dec 2015

http://www.techrev.ca/the-bright-side-of-patents/

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Two sides of the coin

1. Freedom to Operate - make sure someone else's IP will not prevent your company from carrying out its business objectives
2. Blocking - protect your company's IP so it can be used to gain a competitive advantage in the marketplace by precluding others from utilizing the IP

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Ways to Protect IP

1. Copyrights – original works of authorship, including software
   - Books, movies, websites, etc.
2. Trademarks – word, symbol or device that identifies the source of goods
   - Company logos
3. Patents – right to exclude others from making, using, or offering for sale the invention
4. Trade Secrets – secret information that gives owner a competitive advantage
   - KFC's secret recipe

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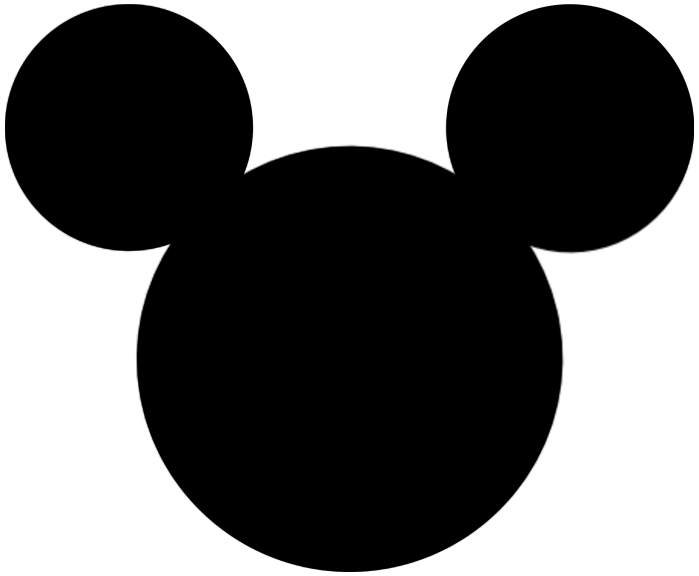
What is a Copyright?

- Right to
  - Copy, distribute, display/perform
  - Make changes, translations (derivative works)
  - Authorize others
- Common types of copyrightable works
  - Books, poems, software,
  - Music, notes, sound recordings,
  - Plays, dances, films
  - Art, paintings, graphics, sculptures
- Copyright Term
  - 70/100 years depending if author/employer owned



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What is/is not copyrightable?

- Copyrightable
  - Works of authorship fixed in a tangible form- The form of expression is what is copyrightable, **not** the underlying ideas and concepts
- Not Copyrightable
  - Phone book, data, DNA sequences, titles or short phrases, type styles, public domain information

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© Steps to getting a Copyright

1. Nothing
   - Copyright is automatic upon creation
   - Notice © 2018 Board of Trustees of the University of Illinois
   - Registration not required - Prevents claim of "innocent" infringement
   - Cost of registration between $35 and $55 depending on circumstances.

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Copyright and FAIR USE

- Common situations involving copyright
  - **Publication** -Journals often require transfer of copyright ownership
  - **Thesis -** Available on line – through ProQuest & Ideals; Very strict about incorporating third party content - tables figures, even if your own publications.
- Permission is needed for any third party content
- Fair Use
  - Not for profit – not commercial
  - Number of copies / amount of text copied limited
  - No Distribution on website
  - Appropriate credit and attribution
  - No detrimental impact on market potential (dilution factor)

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Ownership of Work of Others (all IP)

- Employers - gain rights over works of employees if the work was created *within the scope of employment*
- Work for Hire – company commissioning the work may or may not become the owner (contractor owns the work unless documented otherwise – Nike Swish)
- Prudent to document these issues in a signed agreement which also contains language addressing assignment of copyright

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What is a Trademark?

- Distinctive Words, Names or symbols
- Identifies brand, manufacturer, origin
- Consistently used on products in marketplace
- Valid for 10 years, renewable
- Must be used, Must be enforced
- Cannot be generic
- Symbols ® vs ™
- Fees ~$400 per class
- Average consumer cannot be confused

Examples:

- **Logos:** Nike Swoosh
- **Names**: Coca Cola®, Ivory, Kodak®, Crock Pot, Hoola Hoop
- **Color/Sound**: Pink – Corning insulation, NBC chimes
- **Slogans**: Don't leave Home without it, Have you driven a Ford lately?
- **Container Shape/Packaging**: Coke bottle

TARGET

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Trademarks – Obtaining and Keeping

- Perform a Search
  - Make sure the potential trademark is not already being used
- Avoid generic or descriptive terms
  - Arbitrary marks that have no relation to the product stand the best chance of being recognized as a mark (Oreo, 5th 3rd Bank, etc.)
- Make wide use of the trademark and make sure that it is used and marked properly
- Register your trademark at the federal and state levels (local – restaurants)
- Must avoid confusion (geography, business, name addendums. …lab…industries…etc.)
- Proprietary Eponym (aka, generic trademark)
  - Thermos, Kleenex, Dumpster, Band-Aid, Realtor, TASER
  - Holla Hoop? Google? Xerox? At risk…
  - Anymore?

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Case Study: Burger King, Mattoon, IL

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Case Study: Burger King, Mattoon, IL

Not home of the Whopper

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The United States of America

The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extensions.

Director of the United States Patent and Trademark Office

What is a Patent?

Purpose: "to promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries"

U.S. Constitution, Article I, Section 8

Utility Patents-Inventions can be:

- Compositions of matter – chemicals, bacteria, new drugs
- Machines, Devices, Manufactures, methods of making
- Processes, methods of treatment – using new or old compounds
- Any new or useful improvements or combinations thereof

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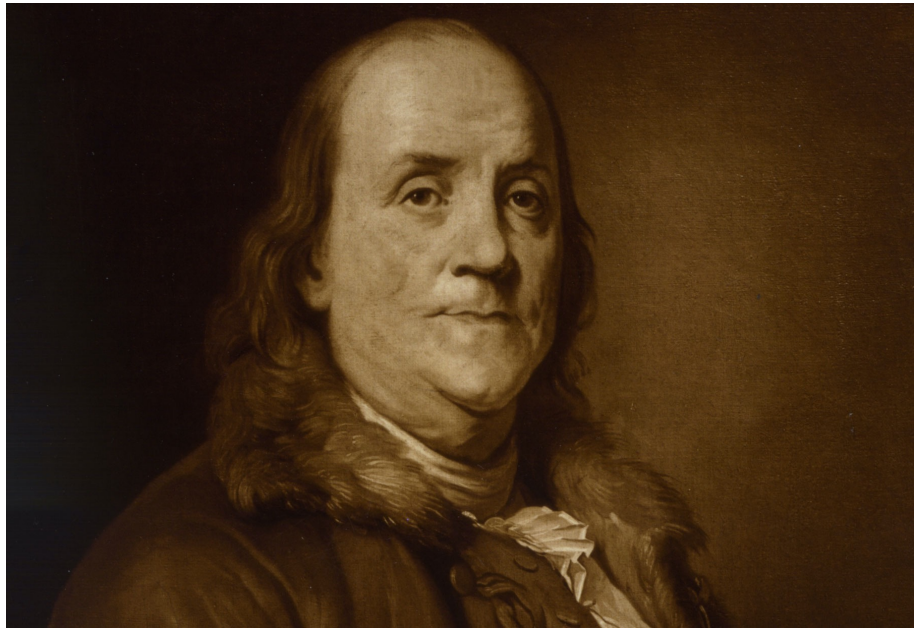
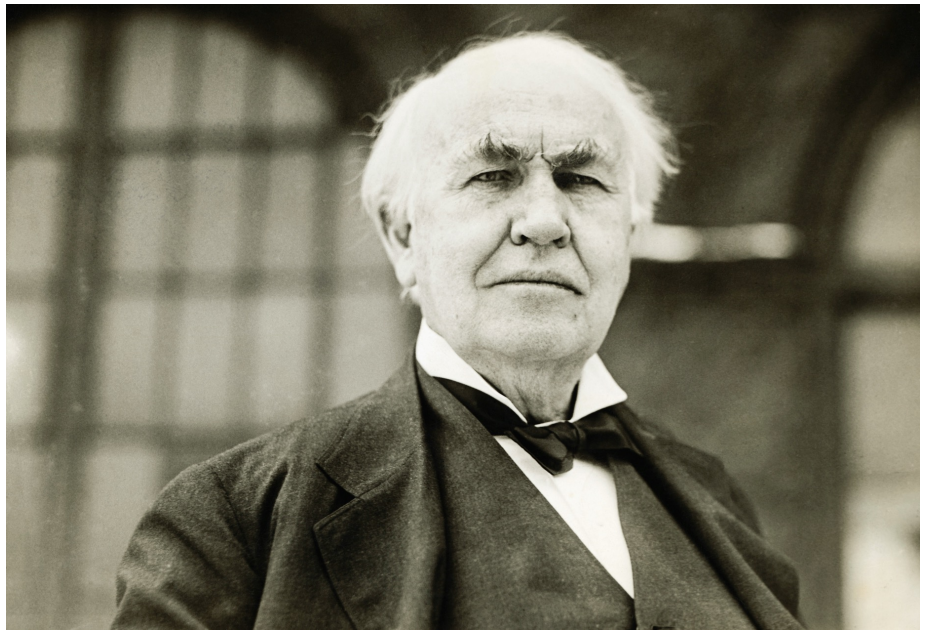
Prolific Inventors How Many ???



Benjamin Franklin = 0

"If I have seen further, it is by Standing on the Shoulders of Giants."

-Sir Isaac Newton



Thomas Edison = 1,093

"Anything that won't sell, I don't want to invent. Its sale is proof of utility, and utility is success."

-Thomas A. Edison

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What is Patentable?

- A patentable invention is anything under the sun made by man provided it passes the following tests:
  1. Novel
  2. Not obvious
  3. Useful
  4. Enabled
- Cannot Patent:
  - Naturally occurring articles
  - Laws of Nature, scientific principles
  - E.g. DNA

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How do you obtain a Patent ?

- File a patent application (description, drawings, claims) with the US Patent and Trademark Office (PTO)
  - Prosecute: Iterative process between PTO Examiner and you to arrive at claims
  - Claims are what defines your property
  - Costs range from initial filing fee of $140 to $000's depending on claims, countries filed in addition to legal expenses
- Patent 'Issued' around 2-3 years after first filing
  - Duration of patent is 20 years from filing
- International (Patent Cooperation Treaty)

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Patents – Issues Prior to Filing Application

- Is there already a patent or a patent pending for a similar device?
- What is the life-span of the invention?
  - A short life-span may make a patent impractical (e.g. software)
- Is a patent the appropriate protection?
  - Would disclosing the information required to patent give an advantage to competitors?
  - Would company goals be better served by holding the information as a trade secret?
  - E.g. Coca Cola, KFC, etc.

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Patents – Inventorship vs. Assignment

- Inventor(s) – the individuals named to whom the invention can be attributed
  - All inventors possess a full and equal right to practice
- Assignee – the entity to whom the right to practice the invention is provided
  - May have zero or multiple assignees
  - Can assign by geography, field of use, etc.
- Exclusive Rights require assignment from <u>ALL</u> inventors

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Patents – US Provisional Patent Application

- An option that can be utilized to avoid, for a certain time (12 months), loss of patent rights through public disclosure
  - Example: article containing enabling disclosure of the invention will be published in scientific journal
- Filing date as of the date of filing the provisional application
- Must file a regular application within one year or lose your filing date (and ability to obtain a patent if public disclosure made)
- Does not count against the 20 year term
- Don't miss the non-provisional date or lose ability to patent

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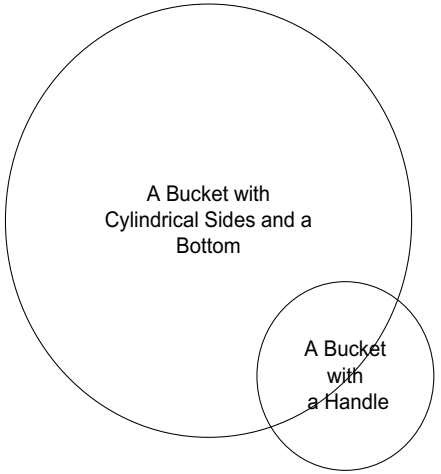
What does a Patent do for you?

A patent gives its owner the right to *exclude* others from making, selling, using, or importing the patented invention for a limited time (20 yr)

- A patent does not guarantee you the right to practice!
  - May need other patents
  - Overlapping Patent Rights
  - Freedom to Operate
- Authorizing others is licensing.
- Using others' claims in a patent without a license is infringement
  - 3x penalties



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Patent Law Changes

America Invents Act:

- US moved to the **"first to file"** vs the 'first to invent" system
- More Pre issuance and Post grant challenges to patents

Myriad Patent Decision:

- Isolated DNA covering genes is not valid 'patent subject matter'
- cDNA isolated is valid subject matter

Alice Corp. v. CLS Bank International:

- Merely requiring generic computer implementation fails to transform an abstract idea into a patent-eligible invention.

Recent rulings on obviousness.

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Trade Secrets – Definition

- Any formula, pattern, device or compilation of information used in a business that gives the trade secret owner an *opportunity to obtain an advantage* over competitors who do not know it. The trade secret can not be public knowledge.
- Examples: KFC secret recipe, Coke formula

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Trade Secrets – Protection

- If information is secret and *reasonable measures are taken to keep it secret*, it will be protected by law
- The law does not create a monopoly for use on the secret like other protections of intellectual property, but it only *protects* the secret from being *improperly appropriated*
- Unlike patents, trade secrets may be "reverse engineered" and thus no longer secret

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Trade Secrets – Protection

- Businesses need to take proper steps to ensure the security of their trade secrets
  - Security within the plant or office
  - Contractual safeguards with employees and business partners such as non-competition agreements and confidentiality agreements
  - Workplace controls to prevent the dissemination of trade secrets to individuals that do not need access to them

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7 Intellectual Property Mistakes Startup Entrepreneurs Often Make

2/3/2014 by Ray Arner, et al.http://www.jdsupra.com/legalnews/7-intellectual-property-mistakes-startup-44065

Entrepreneurs Don't:

- Invest sufficient Time, Money, and Thought in their IP
- Focus on how patents can protect revenue
- Focus enough on IP ownership
- Take advantage of 'Track One' Priority Examinations (for faster application process)
- Use confidentiality agreements to protect IP
- Always select a distinct and strong trademark

Entrepreneurs seek patent protection(s) too early

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Licensing as a way to Commercialize IP

- What is a **License**?
  - A legal agreement between the owner of the IP (licensor) giving a company (licensee) the right to use the IP.

- Defines rights and obligations of the parties
  - Right to Sublicense
  - Term/Duration

- Owners can divide IP rights by
  - Field of use
  - Geographical territory
  - Exclusivity

- Requires Licensee to
  - Royalty payment
  - Diligence in commercialization
  - Defines remedies if obligations are breached

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Start Up IP Considerations

Your Product Features	Utility Patent < 1-yr old	Design Patent < 1-yr old	Trademark	Copyright
Brands, names, logos, slogans			■	■
2-Dimensional designs		■		■
3-D product shapes (appearance only, not function)		■		■
Creative, artistic works (books & writings, artwork, audio, video, graphic design, printed materials, website text & design)				■
Software source code				■
Software functionality, web apps, business methods	■			
How your invention works (a better device or way of doing something)	■			
How your invention looks (an aesthetic/ornamental design)		■		■

TECHSTARTUPLAWYER

https://live-techstartuplawyer.pantheon.io/wp-content/uploads/2013/11/IP-Checklist-Article-2.pdf

Note: business methods patents more difficult to obtain since 2014

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Hershey's Kisses

Protected by Four Types of Intellectual Property

- Trademark for its shape (#1,584,608)
- Patent for its method of reducing fat levels in cocoa used (#5,464,649)
- Copyright for commercials made to advertise (PAu-697-741)
- Trade secret on its recipe for producing the milk chocolate candy

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Intellectual Property Protection At a Glance

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Alan R. Singleton, Esq.
singleton@singletonlawfirm.com

2001 South First Street, Suite 209 Champaign, IL 61820 217-352-3900

	Patents	Trademarks	Copyrights	Trade Secrets
Property Protected	Anything man-made that is new, useful, and non-obvious.	Any distinct word, name, symbol, or device used to identify a source of goods or services.	Original work of authorship fixed in a tangible medium of expression.	Commercially valuable information not generally known or readily ascertainable, if reasonable efforts are used to keep it secret.
	Not new if there is a commercial use, offer for sale, or public disclosure more than one year before a patent is applied for.	Inherently distinctive if arbitrary, fanciful, or suggestive.	Fixed if it is sufficiently permanent (written down, recorded, painted, saved electronically, etc.)	Disclosure to one person without confidence may destroy a trade secret.
	There is no one year grace period for foreign patents.	Also distinctive if descriptive with acquired secondary meaning.	Originality requires some amount of creativity by the author.	More efforts required for more valuable secrets.
Registration	U.S. Patent and Trademark Office. Application required.	U.S. Patent and Trademark Office for federal protection. Secretary of State's office for state protection. Registration advised but not requried.	U.S. Copyright Office within the Library of Congress. Registration advised but not required.	NONE.
Rights	Right to exclude others from making, using, selling, or offering for sale in U.S. or importing to U.S.	Right to stop others from using confusingly similar marks in commerce.	Exclusive right to reproduce, prepare derivative works, distribute, perform publicly, and display publicly.	Right to sue others from improperly acquiring the trade secret or breaching confidence regarding the trade secret. Does not prevent reverse engineering.
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	Pat. No. ######.	® if registered with USPTO.	© 2007 Joe Smith.	
Duration	Generally, 20 years from the date of filing.	Non-registered: No limit as long as you continually use it.	Life of the author plus 70 years.	No limit as long as it still qualifies as a trade secret.
		Registered: No limit as long as you continually use it and file appropriate renewal papers.	Work for hire: the earlier of 95 years from publication or 120 years from creation.	
Infringement	Every claim limitation in the patent is found, literally or equivalently, in the accused device or method.	Infringer's mark causes a likelihood of confusion with your mark.	Infringer has copied your work without permission.	Another has knowingly misappropriated your trade secret for his or her own gain or to harm you.
		If your mark is famous, then you can also sue if another dilutes or tarnishes your mark.	Infringer's work is substantially similar to yours.	

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Working Sessions

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