Patents and Intellectual Property

Presented by: Michael Razavi
In 2014, he received the National Medal of Technology and Innovation "for invention and commercialization of flash storage technology to enable ubiquitous data in consumer electronics, mobile computing, and enterprise storage."

Harari is a member of the National Academy of Engineering and is named on over 180 U.S. patents.
Questions to consider:

- What are the types of Intellectual Property?
- Why apply for IP protection?
- Is there any down side to applying for IP?
- What are provisional and non-provisional patents?
- What are the costs going to be?
- How long does it take to get a patent?
- How long is my IP good for?
- Is my IP protected in the world?
Questions to consider:

• What cannot be patented?
• Do I need a patent attorney?
• How can USPTO help me file my application?
• What is the examination process?
• What is patent infringement in the US?
• What is the enforcement process?
• What is my goal as an inventor?
• What resources are available to me?
Overview of IP: The USPTO in 2017

- 12,588 Total Employees at USPTO
- $3 billion Total Budget
- 8,147 Patent Examiners
- 647,388 Patent Applications filed
- 373,093 Patents issued

USPTO Headquarters in Alexandria, VA
Overview of IP: The USPTO in 2017

549 Trademark Examining Attorneys

594,107 Trademark Applications

153,195 Certificates of Registration

USPTO Headquarters in Alexandria, VA
# Overview of Intellectual Property

<table>
<thead>
<tr>
<th>What is protected</th>
<th>Utility Patent</th>
<th>Design Patent</th>
<th>Trade Secrets</th>
<th>Copyrights</th>
<th>Trademarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventions – Process, machine, manufacture, or composition of matter</td>
<td>Ornamental characteristics embodied in, or applied to, an article of manufacture</td>
<td>Business-related information (formulas, techniques, information)</td>
<td>Art, in an all-encompassing sense</td>
<td>Marks that indicates the source or origin of goods or services</td>
<td></td>
</tr>
</tbody>
</table>

|Requirements| Utility, novelty, and nonobviousness| Novelty and nonobviousness| Commercial value, generally not known, and reasonable efforts of secrecy| Original, authorship, and fixation in a tangible medium| Use in commerce and either distinctiveness or secondary meaning|

|Protects Against...| Making, selling, offering for sale, and importing| Making, selling, offering for sale, and importing| Stealing| Copies, performances, displays, and derivative works| Use of a mark that causes the likelihood of confusion|

|Endures until...| 20 years from filing date| 15 years from issuance| Publicly disclosed| The life of the author + 70 years| Abandoned|

|Rights of Independent Third Party Creators| None| None| Full| Full| None|

8/21/2018
Overview of IP: The Mobile Phone

**Trademarks:**
- Made by “Apple” (logo)
- Product “iPhone”
- Software “iOS”, “Safari”

**Patents:**
- Semiconductor circuits
- Touch Screen
- Battery/Power Control
- Antenna
- Speaker
- Device Housing

**Copyrights:**
- Software code
- Instruction manual
- Ringtone
- ...

**Trade secrets:**
- ???

**Designs (some of them patented):**
- Form of overall phone
- Placement of button & speaker
- Color pattern of trim
- Surface finish
Question Time!

Which of these words are protected as a trademark?

A: “Super Bowl”
B: “Band-Aid”
C: “Frisbee”
D: All the Above

All of them are owned as trademarks even though these words are commonly used. “Super Bowl” is owned by NFL. “Band-Aid” is owned by Johnson & Johnson. “Frisbee” is owned by Wham-O.
Overview of IP: Trademarks

Common Law
- protection derived from use (™)

State Registration
- registered with one or more U.S. states

Federal Registration
- registered in the U.S. Patent and Trademark Office

Protects against confusion as to the source of goods or services, not from competition that does not confuse customers
Which popular book was originally a fan fiction that had to be rewritten to fit with copyright standards?

A: Huckleberry Finn  
B: Price and Prejudice and Zombies  
C: Harry Potter  
D: Fifty Shades of Grey

Originally called Master of the Universe, this popular book was originally a fan fiction for the book Twilight by Stephenie Meyer. The illegal work was revised later on with minor word substitutions to fulfill copyright laws.
Overview of IP: Copyright

- Protects “original works of authorship” including literary, dramatic, musical, artistic and certain other intellectual works fixed in a tangible medium
- Library of Congress administers registration; USPTO advises the Executive branch on intellectual property issues including copyright
- © symbol represents an identification of the owner, not an indication that the copyright has been registered
Overview of IP: Source of Authority

Patents and Copyrights

- “The Congress shall have the power... To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries” (U.S. Const., Art. I, Sec. 8, emphasis added)
- First patent statute and first copyright statute enacted in 1790 during the first Congress

- Trademarks
- “The Congress shall have the power... To regulate commerce with foreign nations, and among the several states”
- First federal statutes were enacted in 1870 and 1881
Question Time!

Which company kept one of their secret recipes so secret that they accidentally misplaced it and recovered it after almost 40 years?

A: Kentucky Fried Chicken
B: McDonald’s
C: Coca-Cola
D: Burger King

In 2004, the Big Mac's special sauce recipe was thought to be lost until it was recovered from a California supplier who helped make the sauce 36 years ago.
Overview of IP: Why Trade Secret?

Trade Secret Basics:
- Protects commercially valuable proprietary information, e.g., formulas or business information that gives a competitive advantage
  - Customer lists
  - Product formulations
  - Search algorithms
- Trade Secrets are not generally known and must be subject to reasonable efforts to preserve confidentiality

Common Ways to Lose a Trade Secret:
- Failure to take adequate steps to prevent disclosure
- Owner or owner-authorized disclosure
- Reverse engineering
- Independent development
Who is the first and only U.S. President to have been awarded a patent?

A: George Washington
B: James Madison
C: Abraham Lincoln
D: Theodore Roosevelt

Abraham Lincoln's “Buoying Vessels Over Shoals” invention allows boats to go over shoals or obstacles in a river through the use of inflatable bellows.
Overview of IP: Patents

• Right to **exclude others** from making, using, selling, offering for sale or importing the claimed invention
• Right conditional on inventor applying for, and USPTO issuing, a patent
• Strict time limits to apply for a patent
• Limited term
• Territorial: protection only in territory that granted patent; **NO world-wide patent**
Overview of IP: Patents Quid Pro Quo

Time-Limited Monopoly

Discloses Invention
Overview of IP: Why Get a Patent?

• A patent can be
  – Used to gain entry to a market
  – Used to exclude others from a market
  – Used as a marketing tool to promote unique aspects of a product
  – Sold or licensed, like other property
What is patentable?

NEW, USEFUL, NONOBVIOUS, ENABLED & CLEARLY DESCRIBED

- Process
- Machine
- Manufacture
- Method of making
- Improvements thereof
Cumulative Total Utility Patents Issued, 1790-2018

2018, 10030956
1794: US X72 I1
Eli Whitney
Cotton Gin

1837: US 132 A
Thomas Davenport
Electric Motor

1876: US 174465 A
Alexander Bell
Telephone

1880: US 223898 A
Thomas Edison
Lightbulb

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1900s-1950s

1906: US 821393 A
Wright Brothers
Airplane

1930: US 1773980 A
Philo T. Farnsworth
Television

1940: US 2206634 A
Enrico Fermi, Edoardo Amaldi, Bruno Pontecorvo, Franco Rasetti, Emilio Segre
Radioactive Isotope Production

1946: US 2404334 A
Frank Whittle
Jet Engine
1950s-1970s

1950: US 2524035 A
John Bardeen, Walter H. Brattain
Transistor

1958: US 2866012 A
Charles P. Ginsburg, Shelby F. Henderson
Video Tape Recorder

1961: US 2981877 A
Robert N. Noyce
Semiconductor

1963 US 3093346 A
Manned Space Capsule
On June 19, the U.S. Patent and Trademark Office issued patent number 10 million—a remarkable achievement for the United States of America and our agency.

More than just a number, this patent represents one of ten million steps on a continuum of human accomplishment launched when our Founding Fathers provided for intellectual property protection in Article 1, Section 8, Clause 8 of our Constitution.
1790: First US Patent Issued to Samuel Hopkins

1849: Patent Issued to Future President Abraham Lincoln

1880: Patent Issued to Thomas Edison for the Lightbulb

1876: Patent Issued to Alexander Bell for the Speaking Telephone

1974: Patent Issued to Ted Hoff for the Microprocessor

1906: Patent Issued to the Wright Brothers for a Flying Machine

1980: Patent Issued to the Cohen and Boyer for Recombinant DNA Techniques

2008: Patent Issued to Radia Perlman for internet STP
### Basic Fees

<table>
<thead>
<tr>
<th>Type</th>
<th>Utility</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic filing fee</strong></td>
<td>$300/$150/$75</td>
<td>$200/$100/$50</td>
</tr>
<tr>
<td><strong>Search Fee</strong></td>
<td>$660/$330/$165</td>
<td>$160/$80/$40</td>
</tr>
<tr>
<td><strong>Examination fee</strong></td>
<td>$760/$380/$190</td>
<td>$600/$00/$150</td>
</tr>
<tr>
<td><strong>Issue</strong></td>
<td>$1000/$500/$250</td>
<td>$700/$350/$175</td>
</tr>
</tbody>
</table>

**Provisional Application Filing Fee:** $280/$140/$70
Maintenance fees

- Due at 3, 7, and 11 year anniversary
- With six month window to pay
- Additional six month grace period
- Pay online, via fax or U.S. mail
- All major credit cards, EFT, check, money order, deposit account
- Check status at www.uspto.gov/patents/process/maintain.jsp
Resources

- Comprehensive Information and Training Material for First Inventor to File: [http://www.uspto.gov/aia_implementation/patents.jsp#heading-10](http://www.uspto.gov/aia_implementation/patents.jsp#heading-10)
- Inventor Resources: [http://www.uspto.gov/inventors/index.jsp](http://www.uspto.gov/inventors/index.jsp)

Other Resources:
- Education for the Public (including IP Awareness Assessment Tool)
- Pro Bono
- Law School Clinical Program
- Pro Se Assistance
- Reginal Offices
- Scam Prevention
Thank You!

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