The Fundamentals of Intellectual Property for the Entrepreneur

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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
Patented Products

Can you identify a patented product on this desk?
### Patented Products

**Inventor:**
- Timothy Miller
- Steven Jobs
- Alexander Graham Bell

**Invention:**
- Ergonomically condensed QWERTY keyboard
- Touch screen device, method and graphical user interface for determining commands by applying heuristics
- Improvement in telegraphy

<table>
<thead>
<tr>
<th>Inventor</th>
<th>Patent number</th>
<th>Application filed</th>
<th>Patent granted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timothy Miller</td>
<td>5,660,488</td>
<td>9/23/94</td>
<td>8/26/97</td>
</tr>
<tr>
<td>Steven Jobs</td>
<td>7,479,949</td>
<td>4/11/08</td>
<td>1/20/09</td>
</tr>
<tr>
<td>Alexander Graham Bell</td>
<td>174,465</td>
<td>2/14/1876</td>
<td>3/7/1876</td>
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</tbody>
</table>
Patents Identified

LCD monitor
LCD stand

Printer
Staple remover
Post-it Notes
Binder clip

Ergonomic keyboard
Keyboard support
Computer mouse pad

Computer mouse
Printer
Phone
Stapler
2 hole punch
iPhone
PC speaker

Staple remover
Post-it Notes
Binder clip

Ergonomic keyboard
Keyboard support
Computer mouse pad

Computer mouse
Printer
Phone
Stapler
2 hole punch
iPhone
PC speaker
Case Study: Apple Inc.

Facts about Apple and iTunes store:

More than 13 million songs, priced at 69¢, 99¢, or $1.29 each
Movies, ringtones, podcasts, and apps available

Consider these numbers with the number of iPods sold
Case Study: Apple Inc.

Total Number of iPod units sold

Number of units sold (in millions)

Month/Year

Jan '03  Jan '04  May '04  Aug '04  Oct '04  Dec '04  Mar '05  Nov '05  Jan '06  Apr '07  Sep '07  Oct '07  Apr '08  Sep '09  Aug '10

0.6  2  3  3.7  6  10  15  30  42  100  110  120  152  228  269

5
Types of Property

Real property

Personal property

Intellectual property

Trademark Registration #: GE: 3386370, Kellogg’s: 3445274
So, where’s the connection between the number of iPods sold & Intellectual Property?
What is Intellectual Property

4 types of intellectual property:

(1) Copyright

(2) Trademark

(3) Trade Secrets

(4) Patent
Copyright

**Definition:** A form of protection provided to the authors of “original works of authorship”

**Protects:** Literary, dramatic, musical, artistic, and certain other intellectual works

**Duration:** In general, author’s life + 70 years

For more information on copyright, visit the U.S. Copyright Office website at http://www.copyright.gov
Trademark

**Definition:** Any word, name, symbol, or device, or any combination, used, or intended to be used, in commerce to identify and distinguish the goods or services

**Protects:** All of the above & logo, banner, sound, smell, etc.

**Duration:** 10-year terms with 10-year renewal terms

Trade Secrets

**Definition:** Any information that provides economic value that is not in the public domain and that has been reasonably kept secret

**Protects:** Formulas, patterns, compilations, programs, devices, methods, techniques or processes

**Duration:** As long as they remain secret
Definition: A grant of property rights by the U.S. Government through the USPTO

Patentability: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent” (35 U.S.C. 101)

Duration: [Utility/Plant] 20 years from date of filing; [Design] 14 years from patent grant
<table>
<thead>
<tr>
<th><strong>Purpose:</strong></th>
<th>To promote the progress of science and useful arts… (U.S. Constitution Article I, §8, Clause 8)</th>
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<tbody>
<tr>
<td><strong>System:</strong></td>
<td>A quid pro quo; Disclosure of the invention to the government in specific terms, in exchange for exclusive rights to the inventor</td>
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Filing for a Patent – Why bother?

Patents have the attributes of **personal property** and may be:

- Sold to others;
- Mortgaged;
- Assigned;
- Given away;
- Bequeathed in a will and inherited; or
- Licensed and taxed
A U.S. patent *grants* a right to *exclude* others from:

- Making;
- Using;
- Offering for sale;
- Selling the invention throughout the U.S.; or
- Importing the invention into the U.S.
Infringement: Violation of any of the patent rights

Enforcement: Up to patent owner, not USPTO. The USPTO-granted rights valid only in U.S.

PCT: Enables a U.S. applicant to file an international utility patent application in a standardized format at USPTO. A filing system; and it does not grant a patent
Patentable subject matters:
“... any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof…
Software and business methods also patentable

Non-patentable subject matters:
A mere idea or concept; pure mathematical formulas; phenomena of nature
Types of Patents

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

**Design:**
New, original & ornamental design
→ How an invention looks

**Plant:**
Asexually-produced distinct and new variety of plant
Examples of Design Patents
Types of Applications

**Provisional:**
- One year period
- Filed for filing date priority
- No claims required
- Not examined, so no patent
- Not allowed for design

**Non-Provisional:**
- 20-year patent protection from filing date
- Examined for patentability
- Claims required
Filing a Patent Application in U.S. and in other countries

**U.S.:**
The real person or persons who first made the invention (i.e. the first to invent), or his/her assignee, is entitled to a patent

**Other countries around the world:**
The first to file a complete application is entitled to a patent, provided the invention was not copied from another
Geographic locations where Apple products are sold
Patents and Universities

**University research** has been vital to:

- Fostering innovation;
- Ensuring economic opportunity; and
- Creating American jobs

**Transfer of new technologies** from university labs to marketplace is critical
Patents and Universities

University research

Royalty generation from university innovation
- Fostering innovation
- Ensuring economic opportunity
- Creating American jobs

Diffusion of innovation & Transfer of technology from university labs to marketplace

Capturing IP for IP protection
Ideas for Your Ideas

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

National Collegiate Inventors and Innovators Alliance
http://nciia.org/competitions

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

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USPTO Website:
www.uspto.gov