Intellectual Property Primer

UNEMED

2015

BOOT CAMP

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Background

Experience:

UNMC / UNeMed Corporation – Director of Intellectual Property
University Tech Transfer: Manage patent portfolio and IP contract matters

International Intellectual Property Institute (Washington, DC) – Consultant
NGO and Think tank: Travel to the Philippines to teach IP to Universities and ASEAN government IP offices


Chicago Law Firm: Draft patent applications, assist patent litigation

Education:

Chicago-Kent College of Law, Illinois Institute of Technology, Chicago, IL
LL.M. in International Intellectual Property Law

Creighton University School of Law, Omaha, Nebraska
J.D.

Creighton University, Omaha, Nebraska
B.S. in Biology
Outline

1) Overview of Intellectual Property
   Types of IP and Overlap
   Commercial Uses of IP

2) UNMC Policies on Intellectual Property
   Ownership: Who owns what?
What is Intellectual Property?

“Products of the human mind and creativity that are protected by law”

- Intangible – lacks physical substance
- Transferrable – can be bought and sold (or licensed)
- Valuable – may have significant worth
- Limited – by time and public access/use
What is Intellectual Property?
What is Intellectual Property?

= What the employees thought up (concepts, ideas, plans, creativity)

= What the employees wrote down (lab notebooks, procedures, drafts)

= What the business protected: (patents, copyrights, trademarks, trade secrets)
Types of Intellectual Property

World Trade Organization (WTO) recognizes 14 types:

1. Copyright
2. Moral rights
3. Industrial design rights
4. IP cores used in electronic design
5. Patent
6. Plant breeders' rights
7. Plant variety protection
8. Personality rights
9. Trade dress
10. Trademark
11. Geographical indication
12. Domain Name
13. Trade secret
14. Traditional knowledge
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(The “Main Four”)
Copyright

Original works of expression for the following (life+70 or 95 years*)

17 USC Section 106

1. to reproduce the copyrighted;
2. to prepare derivative works based upon the copyrighted work;
3. to distribute copies;
4. to perform the copyrighted work publicly;
5. to display the copyrighted work publicly; and
6. to perform the copyrighted work publicly.

Common-law rights upon fixation to tangible medium
Register for added damages/benefits with Copyright Office for ~$100

Benefit to society: Incentivize Creativity
Copyright Examples

17 USC Section 102

1. literary works (including software)
2. musical works, including any accompanying words
3. dramatic works, including any accompanying music
4. pantomimes and choreographic works
5. pictorial, graphic, and sculptural works
6. motion pictures and other audiovisual works
7. sound recordings
8. architectural works

© 2013 Company Name, Inc. All rights reserved.
Copyright Infringement

Infringement - the unauthorized or prohibited use of works under copyright, infringing the copyright holder's "exclusive rights" (17 USC 106) of reproduce, make derivatives, distribute, sell, play publicly...

Fair Use Defense to Copyright Infringement Factors:
(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.
Copyright Infringement Ex.

Kim Dotcom - founded the file hosting site Megaupload
Site shut down by the United States FBI
Sued by RIAA for music and MPAA for movies

This domain name associated with the website Megaupload.com has been seized pursuant to an order issued by a U.S. District Court.

A federal grand jury has indicted several individuals and entities allegedly involved in the operation of Megaupload.com and related websites charging them with the following federal crimes:

Utility patent – protect novel and nonobvious device, system, method, and/or use for ~20 years from filing ($10K - $50K for US)

Design patent – for protecting the novel ornamental features for 14 years from issuance ($2000 - $5000 for US)

35 USC 271 (negative right)
“the right to exclude others from making, using, offering for sale, or selling” the invention in the United States or “importing” the invention into the United States.

Benefit to society: Incentivize Industrial Applicability of Creativity
Patent

35 U.S.C. 101 – Utility
  ➢ Useful

35 U.S.C. 102 – Novelty
  ➢ Not previously disclosed
  ➢ (If by inventor, then >1yr for US and immediate for most foreign)
  ➢ Invented by the inventor

35 U.S.C. 103 – Nonobviousness
  ➢ Not obvious to one having ordinary skill in the art at the time

  ➢ Written Description
  ➢ Enablement (and Best Mode?)
USPTO prosecution relies on analysis of the “prior art”, which is all public knowledge/disclosures - Must search the prior art for disclosures related to the invention to determine if the invention has Novelty and Nonobviousness (Patentability Search)

35 U.S.C. 102 – Novelty
➢ To be novel, no single reference can disclose each and every element

35 U.S.C. 103 – Nonobviousness
➢ To be nonobvious, the elements lacking from the one reference (or the combination of multiple references that together disclose each and every element) must not be considered obvious to one having ordinary skill in the art.
Patent Filing Strategy

“Just In Time”
1) Provisional US Patent Application
2) PCT International Application (Patent Cooperation Treaty)
3) National Patent Applications
Patent Examples
35 U.S.C. 271 – Infringement

(a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States, or imports into the United States any patented invention during the term of the patent therefore, infringes the patent.

(b) Whoever actively induces infringement of a patent shall be liable as an infringer.

(c) Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination, or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.
Patent Infringement

All Elements Test:

Each element of a claim must be present in the allegedly infringing device in order to establish literal infringement.

Doctrine of Equivalents:

If not every element is present, but the missing element* performs substantially the same function in substantially the same manner and obtains the same result then it is equivalent and infringes.

*This three-part assessment described in Graver Tank Mfg. v. Linde Air Products (1950) was limited to specific elements rather than the invention as a whole by Warner Jenkinson v. Hilton Davis Chemical (1997).
Patent Infringement

7,654,321, Claim 1, as applied to Shady Mills Puppy Farm

1. A fuzzy structure that fetches a ball, comprising:

<table>
<thead>
<tr>
<th>(a) a tail;</th>
<th>Toward the back of the fuzzy structure depicted above is a tail.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) at least one wet nose; and</td>
<td>Below the eyes, above the mouth, is what appears to be one wet nose.</td>
</tr>
<tr>
<td>(c) a plurality of legs.</td>
<td>A plurality (four, in this case) of legs protrude below the body.</td>
</tr>
</tbody>
</table>

Shady Mills Puppy Farm operates a dog kennel website through which it sells shaggy dogs that fetch balls. The fuzzy structure depicted below is one of these Shady Mills dogs.
Patent Infringement

What is Claimed:

1. A compound having a structure of formula (I)

\[
\begin{array}{c}
\text{R}^1 \ \text{N} \ \text{N} \ \text{L} \ \text{R}^2 \\
\text{R}^3 \ \text{X} \\
\end{array}
\]

wherein

each \( R^1 \) is independently heteroaryl, aryl, or alkyl;

\( L \) is selected from \(-\text{NHC(O)NH}-, -\text{NH-SO}_2-, -\text{NHC(O)CH}_2-, \text{-NHC(S)NH}-,\)

\[
\begin{array}{c}
\text{N} \ \text{N} \\
\text{N} \ \text{H} \\
\end{array}
\]

and

\[
\begin{array}{c}
\text{N} \ \text{N} \\
\text{N} \ \text{H} \\
\end{array}
\]

\( X \) is halo, alkyl, alkoxy, aryl, \( \text{CO}_2\text{alkyl}, \text{COalkyl}, \) or haloalkyl;

\( R^2 \) is \( H, \text{alkyl}, \text{alkoxy}, \text{CO}_2\text{alkyl}, \text{COalkyl}, \) or haloalkyl; and

\( R^3 \) is \( H, \text{alkyl}, \) or alkoxy;

or a salt, hydrate, or solvate thereof.

2. The compound of claim 1, wherein each \( R^1 \) is independently selected from furanyl, thiophenyl, pyridinyl, and phenyl.
Utility patent

One of the most famous patent infringement cases is RIM v NTP. RIM is the maker of the well known Blackberry® mobile phone. Facing an injunction to keep the Blackberry mobile phone out of the United States, Canadian-based Research in Motion (RIM) settled the case with NTP involving 7 patents for $612.5 million.
Patent Infringement Ex.

Design Patent

$1 Billion Jury Verdict just in US…

<table>
<thead>
<tr>
<th>Samsung Smartphones BEFORE iPhone</th>
<th>Apple’s iPhone (announced Jan. 2007)</th>
<th>Samsung Smartphones AFTER iPhone</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Samsung Phone" /></td>
<td><img src="image2.png" alt="Apple iPhone" /></td>
<td><img src="image3.png" alt="Samsung Phone" /></td>
</tr>
</tbody>
</table>
Trademark / Service mark

Protects *goodwill* of the producer or service provider by protecting the mark designating origin of a product / service.

($1000 to $3000 for USPTO registration).

Can be a word, phrase, symbol, image, color, sound or certain other indicators that convey source identity.

Use TM (or SM) if not yet registered and ® once registered.

Benefit to society: Known quality expectations = faster decisions
TM / SM Examples
TM / SM Infringement Ex.

Is there a "likelihood of confusion" to the consumers as to the source... and therefore the expectations?
TM / SM Infringement Ex.

Infringement of KFC and also misappropriation of personality rights - Obama Fried Chicken in Beijing???
Special Rules for “well known” marks:

Dilution by Blurring and Tarnishment
TM / SM Infringement Ex.
Trade Secret

Protects confidential information that gives the business and economic advantage, such as formulas, practices, designs, recipes.

US has only State law for protection, but most have adopted the Uniform Trade Secret Act.

Use confidentiality agreements and security measures to protect rights.

Benefit to society: Incentivize business investment
Trade Secret Examples

KEVLAR®

Coca-Cola classic

KFC

Krispy Kreme Doughnuts®

Mrs. Fields Milk Chocolate Chip Cookies

WD-40®

Trigger Pro®
On April 3, 2014, Kolon Industries Inc. won reversal of a $920 million jury award to Dupont Co. over the alleged theft of trade secrets for the making of Kevlar, wiping out the third-largest U.S. verdict of 2011. The appeals panel ruled that “the trial court abused its discretion and acted arbitrarily” in barring South Korean chemical maker Kolon's evidence that DuPont had already made public some material related to its trade-secrets claims. The court granted Kolon a new trial and said the case should be reassigned to another judge.
Overlap of Intellectual Property

Multiple intellectual property rights may protect a single “product”

Example:
Patent: Design patent on shape of bottle
Trademark: COCA-COLA, COKE, bottle curves
Copyright: Advertising and Promotion
Trade Secret: The recipe / formula
Quiz: What IP is in the Apple iPad?
IP Litigation Costs

Patent = $6,000,000

Trademark = $2,000,000

Copyright = $2,100,000

Trade Secret Misappropriation = $3,800,000

Source: AIPLA 2013 Economic Survey, *Data for more than $25 million at risk
# IP Litigation Awards

## Top ten largest initial adjudicated damages awards: 1995-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Plaintiff</th>
<th>Defendant</th>
<th>Technology</th>
<th>Award (in MM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Centocor Ortho Biotech Inc.</td>
<td>Abbott Laboratories</td>
<td>Arthritis drugs</td>
<td>$1,848</td>
</tr>
<tr>
<td>2007</td>
<td>Lucent Technologies Inc.</td>
<td>Microsoft Corp.</td>
<td>MP3 technology</td>
<td>$1,538</td>
</tr>
<tr>
<td>2012</td>
<td>Carnegie Mellon University</td>
<td>Marvell Technology Group</td>
<td>Noise reduction technology on integrated circuits for disk drives</td>
<td>$1,169</td>
</tr>
<tr>
<td>2012</td>
<td>Apple Inc.</td>
<td>Samsung Electronics Co.</td>
<td>Smartphone software</td>
<td>$1,049</td>
</tr>
<tr>
<td>2012</td>
<td>Monsanto Company</td>
<td>E.I. Dupont De Nemours and Company</td>
<td>Genetically modified soybean seeds</td>
<td>$1,000</td>
</tr>
<tr>
<td>2010</td>
<td>Mirror Worlds LLC</td>
<td>Apple Inc.</td>
<td>Operating system</td>
<td>$626</td>
</tr>
<tr>
<td>2011</td>
<td>Bruce N. Saffran M.D.</td>
<td>Johnson &amp; Johnson</td>
<td>Drug-eluting stents</td>
<td>$593</td>
</tr>
<tr>
<td>2003</td>
<td>Eolas Technologies Inc.</td>
<td>Microsoft Corp.</td>
<td>Internet browser</td>
<td>$521</td>
</tr>
<tr>
<td>2008</td>
<td>Bruce N. Saffran M.D.</td>
<td>Boston Scientific Corp.</td>
<td>Drug-eluting stents</td>
<td>$432</td>
</tr>
<tr>
<td>2009</td>
<td>Uniloc USA Inc.</td>
<td>Microsoft Corp.</td>
<td>Software activation technology</td>
<td>$388</td>
</tr>
</tbody>
</table>
UNMC Policies on IP

Regents Bylaws 3.10
Regents Policy 4.4.1  (nonpatentable subject matter)
Regents Policy 4.4.2  (patentable subject matter)
UNMC Policy 7001

http://nebraska.edu/docs/board/bylaws.pdf
http://nebraska.edu/docs/board/RegentPolicies.pdf
http://wiki.unmc.edu/Royalty/Equity_Distribution
Ownership and Commercialization of Inventions and Discoveries

Every invention or discovery by members of the faculty and staff that results from the performance of duties within the scope of their University employment, or from the use of University personnel, property, facilities, or other resources, except where such use is minimal, shall be solely owned by the University provided that the inventor or inventors shall have a share of no less than one-third (1/3) of the net proceeds received by the University resulting from licensing or sale of University owned intellectual property rights associated with such invention or discovery. Further, .... it shall be a condition of employment at the University of Nebraska that any such rights shall be assigned to the University.

The Board shall adopt a formal Patent and Technology Transfer Policy which shall govern the disclosure of inventions and discoveries resulting from performance of duties by faculty or staff within the scope of their employment, or from the use of University personnel, property, facilities, or resources....

Amended, 64 BRUN 139 (17 Oct. 2003)
RP-4.4.1 Ownership of Intellectual Property

Central to the University of Nebraska’s mission is the creation, preservation, and dissemination of knowledge.

The University of Nebraska is committed to providing an environment that supports the research, teaching, and service activities of its faculty, students, and staff. As a matter of principle and practice, the University encourages all members of the University community to publish their articles, books, and other forms of scholarly communication in order to share openly and fully their findings and knowledge with colleagues and the public. This Policy is intended to promote and encourage excellence and innovation in scholarly research and teaching by identifying and protecting the rights of the University, its faculty, staff, and students.

This Policy is included in the terms of employment of all University employees. Admission as a student at the University constitutes an agreement to abide by the terms of this Policy.
Classification of creative works

The ownership of Intellectual Property created by a University employee is determined by the nature of the activity resulting in the Intellectual Property. Under this Policy, Intellectual Property not governed by Section 3.b (Patent Policy) is classified as either:

1) an **Independent Work** governed by Section 4;
   -> Typically Employee Owns

2) a **University Supported Work** governed by Section 5;
   -> Typically Employee Owns unless Support is Substantial

3) an **Institutional Work** governed by Section 6; or
   -> Typically University Owns

4) a **Contractual Work** governed by Section 7.
   -> Typically University Owns
a. Theses, Dissertations and Other Student Works
Students will own the copyrights to their theses, dissertations, and other student works; however, a student must, as a condition to a degree award, grant royalty-free nonexclusive permission to the University to store copies of such works for archival purposes and to reproduce and publicly distribute copies of his or her thesis or dissertation within the University education and research missions… Copyright ownership of theses or dissertations generated by research that is performed in whole or in part by a student with the support of a sponsor or grant shall be determined in accordance with the terms of the sponsored research or grant agreement, or in the absence of such terms, the copyright shall be owned by the University.

b. Software, Patentable Subject Matter and Non-Copyright Intellectual Property
Software, patentable subject matter, and other Intellectual contained or disclosed in theses, dissertations and other student works shall be subject to and governed by the policies that apply to University employees.

c. Student Writings Other Than Theses or Dissertations
Students shall own the copyrights to all student writings not commonly referred to as theses or dissertations and to other creative expressions required in the course of class assignments.
Ex.: Student Doctoral Thesis

Per 4.4.1, Student owns copyright to his/her Doctoral Thesis (unless a sponsor or grant funded the work where it is then dictated by the agreement or is not covered in the agreement is owned by the University) but grants a royalty-free non-exclusive permission to the University to store copies, reproduce, and publically distribute copies.

If, however, disclosed in the Thesis is an invention, which per 4.4.2 is owned by the University, the University may delay public access to the work for up to one year to preserve time for filing a patent application.

So, the possibility exists for the Student to own the expression of the invention in the Thesis but not the invention itself.
Regents Policy 4.4.2 - Invention

Division of Net* Royalties and Proceeds:

One-third to the inventor or inventors; and

Two-thirds in accordance with a separate distribution policy to be established and implemented by each University campus.

(UNMC 7001)

*Net equals gross minus 10% tech transfer fee and sunk costs
As per RP-4.4.2 Board of Regents Patent and Technology Transfer Policy, UNMC is responsible for allocating non-inventor technology transfer proceeds according to its individual campus policy. In order to best utilize non-inventor proceeds and to serve the objectives of the Regents Policy, UNMC shall allocate non-inventor proceeds on a case by case basis as determined by the Committee for Proceed Distribution (CFPD).

Members of the Committee for Proceed Distribution shall be the Vice Chancellor for Business and Finance, the Vice Chancellor for Research, the Vice Chancellor of Academic Affairs, the President of UNeMed, the Patent Administrator and one member at large to be selected annually by a majority vote of the other members.
Gross Proceeds:
UNeMed retains 10% of gross proceeds to cover a portion of technology transfer expenses, and sunk costs recovered.

Net Proceeds:
1/3 to the pool of inventors
2/3 to the Committee For Proceed Distribution (CFPD) to support translational projects

For example, if a licensee paid $200,000 for a technology that has $30,000 in sunk expenses, the distribution would look like this for that revenue:

$200,000 (Gross Proceeds)
$20,000 (UNeMed 10%)
$30,000 (sunk expenses)
$150,000 (Net Proceeds)

$50,000 (1/3 of Net Proceeds) would go to the inventor(s)
$100,000 (2/3 of Net Proceeds) would be distributed by the CFPD