

MICHIGAN STATE

U N I V E R S I T Y

10/19: Intellectual Property

The Capstone Experience

Dr. Wayne Dyksen
James Mariani
Luke Sperling

Department of Computer Science and Engineering
Michigan State University

Fall 2023



*From Students...
...to Professionals*

Caveat Emptor

- Opinions Expressed
 - My Own
 - Do Not Represent MSU
- Not an Attorney
- No Warranty

THIS LECTURE IS GIVEN IN THE HOPE THAT IT WILL BE USEFUL, BUT WITHOUT ANY WARRANTY. IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LECTURE IS WITH YOU. SHOULD THE LECTURE PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.



Lots of Variables

- Who Your...
 - ...Employer Is
 - ...Customers Are
- Very Different Rules/Laws/Policies
 - Industry
 - Privately Held
 - Publically Held
 - Government
 - Government Contractor
 - Educational Institution
 - Etc...



Intellectual Property

- “Ideas” Worth Money
 - Must be able to “fix in a tangible medium”.
 - How to Make Something
 - How to Do Something
 - Work of Art (Music, Movie, Photo, Painting, Novel, Etc.)
 - Pharmaceutical
 - Process
 - Algorithm
 - Etc...
- Must Protect
- Types of Protection
 - Copyrights
 - Patents
 - Trademarks
 - Trade Secrets
 - Etc..
- Check with an IP attorney.



Patent vs Copyright

- Patent
 - Own “Idea” For 20 Years
 - Protect Via Patent Process
 - Harder to Obtain
 - Easier (but not Easy) to Enforce Protection
- Copyright
 - Own “Text” For Life of Author + 70 Years
 - Protect Via Copyright
 - Easy to Obtain
 - Automatically
 - “© 2022 by Wayne Dyksen. All Rights Reserved.”
 - By Formally Registering
 - Harder to Enforce Protection

Check with an IP attorney.

What’s the motivation for granting patents and copyrights?

- Happy Birthday Song
Patty and Mildred Hill, 1893
- Google Books
- Software



Patent vs Trade Secret

- Patent
 - Own “Idea” For 20 Years
 - Protect Via Patent Process
 - Easier to Enforce Protection
- Trade Secret
 - Own “Idea” Forever
 - Protect Via Non-Disclosure and Non-Compete
 - No Enforcement Protection if Secret Disclosed

Interesting Examples of Trade Secrets

- Coke Formula
- Houdini’s Escapes



IP Enforcement

- Laws
 - US State & National
 - Non-US National
 - International
- Big Problem
 - Counterfeiting Rampant
 - Software
 - Drugs
 - Music, Movies, Etc.
 - Clothing & Accessories
 - Etc...
 - Stealing Rampant
 - Enforcement Non-Existent in Some Countries
 - Software Alone Big \$\$



Aside: Patent Trolls

- AKA Patent Hoarders
- Shell Companies
- Buy “Unused” Patents
- File Frivolous Lawsuits
 - Claim Defendant Violating Their Patent
 - Hoping for Settlement
 - Something Like Blackmail
- Google “patent troll”



Non-Disclosure Agreement (NDA)

- You agree not to misuse company information.
 - Trade Secrets
 - Copyrights
 - Confidential Information
 - Product Plans
 - Software
 - Schematics
 - Etc...
 - Etc..
- Misuse Includes...
 - ...Disclosing
 - ...Selling
 - ...Using for Your Startup Company
 - ...Using at Next Employer
 - Etc...



Intellectual Property Agreement (IPA)

- You agree to assign all IP created to your employer.
 - Copyrights
 - Patents
 - Trade Secrets
 - Etc...
- Agreements Vary in Scope
 - Relationship of IP to Your Job
 - Time
- What happens if you...
 - ...create patented IP that earns your employer \$1B?
 - ...leave your employer to patent an idea on your own?



Non-Compete Agreements

- You agree not to compete with your employer.
- Agreements Vary in Scope
 - Relationship of Employer Markets
 - Position
 - Time
- May Affect
 - Moonlighting
 - Career
- Can Be Very Restrictive



Employment Agreements

- Required as Condition of Employment
- Agreement May Cover
 - Non-Disclosure
 - Intellectual Property
 - Non-Compete
 - Etc..
- Agreements Vary
 - Employer
 - Position
- Probably Non-Negotiable for You



Remedies

- What happens if you violate an agreement?
- Agreements Vary
 - Function of
 - Employer
 - Position
 - Etc.
 - Can Be Severe
 - Should Be Taken Seriously
- Often Monetary Damages Levied Against
 - You Personally
 - Your Startup Company
 - Your New Employer
- Not to Be Taken Lightly

Typically pursued
in civil courts vis-
à-vis criminal
courts.



Seek Professional Advice

- If your idea is valuable,...
 - ...protect it,
 - ...in advance.
- Invest
 - Time
 - Money
- Consult
 - Trusted, Experienced Mentors
 - State and Local Development Authorities
 - Experienced IP Attorney
- In Advance



Questions?

?

?

?

?

?

?

?

?

?



What's ahead?

[1 of 2]

- Upcoming Meetings
 - ~~10/19, Th: Intellectual Property (Luke)~~
 - 10/24, Tu: Fall Break
 - 10/26, Th: Design Day and Project Videos
 - 10/31, Tu: Garret Gaw, VP Amazon
 - 11/02, Th: Toby Hall, CEO Roosevelt Innovations

What's ahead?

[1 of 2]

- Upcoming Meetings
 - 11/14, Tu: Beta Presentations
 - 11/16, Th: Beta Presentations
 - 11/21, Tu: Beta Presentations
 - 11/23, Th: Thanksgiving
 - 12/03, Su: Project Videos Due
 - 12/06, We: All-deliverables and TEF Due
 - 12/08, Fr: Design Day

Notes on Alphas and Betas

- Alpha
 - Prove that all of your risks are mitigated
 - Live software demos
 - Not integrated, buggy, doesn't look great, etc.
- Beta (November 14th)
 - Feature complete software
 - Every feature of your system needs to be complete and integrated
 - Can look slightly ugly (not awful) and be slightly buggy (if it doesn't affect usage of the system)
 - Stretch goals can be completed after Betas
 - Confirm with your TM if a feature is a stretch goal or requirement for Betas

