MICHIGAN STATE
U N I V E R S I T Y

11/08: Intellectual Property

The Capstone Experience

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Fall 2021

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
    - "© 2021 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

Interesting Examples of Trade Secrets
- Coke Formula
- Houdini's Escapes

  - Protect Via Non-Disclosure and Non-Compete
  - No Enforcement Protection if Secret Disclosed

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
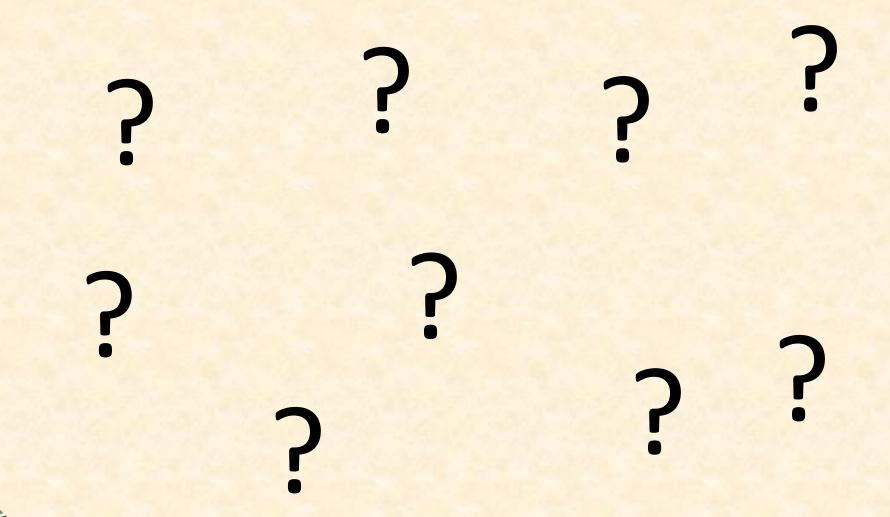 - Position
- Probably Non-Negotiable for You

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?

Intellectual Property

What's ahead?

- All-Hands Meetings
  - 11/01: M Design Day and the Project Videos
  - 11/03: W Team Status Report Presentations
  - 11/08: M Intellectual Property
  - 11/10: W Ethics and Professionalism
  - 11/15: M Team Beta Presentations
  - 11/17: W Team Beta Presentations
  - 11/22: M Team Beta Presentations
  - 11/24: W Team Status Report Presentations
  - 11/29: M Team Status Report Presentations
  - 12/01: W Team Status Report Presentations
  - 12/05: S   Project Videos Due by Midnight
  - 12/06: M Project Videos
  - 12/08: W Project Videos and All Deliverables
  - 12/09: T   Design Day Setup
  - 12/10: F   In-Person Design Day (7:00 a.m. – 12:00 p.m.)
  - 12/17: F   On-Line Design Day Awards Ceremony (7:45 a.m. – 9:45 a.m.)

What's ahead?

- Design Day Booklet Content
  - Proof Status
    - Proof PDF Round 05 Posted
    - Check it out. You never know…
  - Updated Artwork
    - No More Updates Unless "Disaster"
    - Check All Artwork is Correct

Read Me

- Presenting
  - The purpose of the Beta Presentation is to demonstrate that the software portion of the project is complete. While the system may need a little debugging and a little user interface upgrades, the software is expected to be feature complete and delivered to your client on(Wednesday, December 8).
  - The time limit for your presentation is 14 minutes, which will be strictly enforced. Practice your presentation to ensure that you will finish within the allotted time.
  - Each team will share and "drive" the slide deck for their own team.
  - Plan on spending most of your presentation demonstrating use cases of your software. A suggested approach is as follows.
    - Very Brief Review of Project Overview
    - Software Demonstration of Use Cases (Skipping Architecture Diagram and All of the Screen Shot Slides in Your Slide Deck)
    - Brief Summary of What's left to do?
  - Your presentation should be professional, well rehearsed, and flow from beginning to end. Practice presenting using Microsoft Teams. Ensure that your slides are readable. Practice sharing your screens and demonstrating your software. Practice switching from one team member to another.
  - As a backup to live demonstrations, make screen recordings of your software demonstrations using Camtasia in advance.
  - Think of your Beta presentation as a preview of your project video.
  - Give live demos on actual hardware, rather than using screen recordings or simulators.
  - We will meet in two "split-hands" meetings with one Teams channel for James' teams and one for Luke's teams.
  - All team members are required to dress business casual on the day of their presentation.
  - All team members should turn their cameras on during their presentation.
  - Although the presentations will be scheduled over the course of three meetings, all teams must be prepared to present on the first day scheduled, Monday, November 15.
  - The presentation schedule will be posted on our All-Hands Meetings page in the evening of Sunday, November 14.

READ ME

- Creating and Editing
  - Use only the Windows version of Office 365.
  - You must use this PowerPoint slide deck template as is. Do not change the number of slides unless the instructions explicitly allow you to duplicate slides. Do not change the order of the slides. Do not change the styles. Do not edit the master slides.
  - Throughout the template, replace placeholders […] with the appropriate information.
  - Edit the center footer by clicking the Header & Footer button on the Insert ribbon. Change [Team Name] in the footer to your company name as in "Team TechSmith Beta Presentation". If necessary, extend the width of the center footer textbox on the master slide, making sure that you re-center the enlarged textbox.
  - Do not include any company confidential information in your presentation.
  - Delete every textbox that includes "Delete this textbox" and every slide that includes "Delete this slide."
- Submitting
  - All presentations are due to us and to your client by 11:59 p.m., Sunday, November 14.
  - Name your PowerPoint slide deck file as "team-[team-name]-beta-presentation.pptx" replacing "[team-name]" with your team's name (using all lower case and replacing all blanks with dashes) in your filename as in "team-auto-owners-beta-presentation.pptx".
  - Upload your PowerPoint slide deck to the folder "Beta Presentation Slide Decks" in our Microsoft Teams General Channel file space by 11:59 p.m., Sunday, November 14. In addition, upload your slide deck to your team's private channel file space in case your slide deck is deleted by accident from the General Channel file space, and you need to prove that you did indeed upload your slide deck by the due date and time.
  - Email a copy of your slide deck to your client as well by 11:59 p.m., Sunday, November 14. Do not cc us on that email. Include some professional text in the body of your email to practice being a professional and to avoid having your email sent to your project sponsor's junk folder.

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Beta Presentation
[Project Title 36pt]

The Capstone Experience

Team [Team Name 24pt]

[Team Member 1 16pt]
[Team Member 2 16pt]
[Team Member 3 16pt]
[Team Member 4 16pt]
[Team Member 5 16pt]
[Team Member 6 16pt]

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Project Overview

- Point 1

- Point 2

- Point 3

- Etc…

System Architecture

Include your system architecture diagram from your Project Plan presentation.

Update or redo your system architecture diagram if you were asked you to do so in your alpha presentation feedback.

Delete this textbox.

[Title of Screen Shot 1]

You must include at least four screenshots.

Include actual screen shots (i.e., not mockups), replacing [Title of Screen Shot] with an appropriate title.

You may duplicate the Screen Shot template slide as needed.

The screen shots should <u>not</u> contain any bordering transparent or whitespace. Use paint.net to <u>crop</u> them appropriately. **← Read this carefully.**

If a slide contains more than one screen shot or additional artwork (like arrows), group all of the items into a single grouping so that it can be copied-and-pasted and resized as a single unit. **← Read this carefully.**

Delete this textbox.

[Title of Screen Shot 2]

You must include at least four screenshots.

Include actual screen shots (i.e., not mockups), replacing [Title of Screen Shot] with an appropriate title.

You may duplicate the Screen Shot template slide as needed.

The screen shots should <u>not</u> contain any bordering transparent or whitespace. Use paint.net to <u>crop</u> them appropriately. **← Read this carefully.**

If a slide contains more than one screen shot or additional artwork (like arrows), group all of the items into a single grouping so that it can be copied-and-pasted and resized as a single unit. **← Read this carefully.**

Delete this textbox.

[Title of Screen Shot 3]

You must include at least four screenshots.

Include actual screen shots (i.e., not mockups), replacing [Title of Screen Shot] with an appropriate title.

You may duplicate the Screen Shot template slide as needed.

The screen shots should <u>not</u> contain any bordering transparent or whitespace. Use paint.net to <u>crop</u> them appropriately. **← Read this carefully.**

If a slide contains more than one screen shot or additional artwork (like arrows), group all of the items into a single grouping so that it can be copied-and-pasted and resized as a single unit. **← Read this carefully.**

Delete this textbox.

[Title of Screen Shot 4]

You must include at least four screenshots.

Include actual screen shots (i.e., not mockups), replacing [Title of Screen Shot] with an appropriate title.

You may duplicate the Screen Shot template slide as needed.

The screen shots should <u>not</u> contain any bordering transparent or whitespace. Use paint.net to <u>crop</u> them appropriately. ← **Read this carefully.**

If a slide contains more than one screen shot or additional artwork (like arrows), group all of the items into a single grouping so that it can be copied-and-pasted and resized as a single unit. ← **Read this carefully.**

Delete this textbox.

What's left to do?

- Features
    - Feature 1
    - Feature 2
    - Feature 4
    - Feature 4
- Stretch Goals
    - Stretch Goal 1
    - Stretch Goal 2
    - Stretch Goal 3
    - Stretch Goal 4
- Other Tasks
    - Other Task 1
    - Other Task 2
    - Other Task 3
    - Other Task 4

Give a list of the major tasks that you need to accomplish to complete your project.

Your project is expected to be feature complete, so you should <u>not</u> have a features left to do. But, if you do, be honest and list them here. If you do not, simply delete the sub-bullets "Feature 1"…"Feature 4."

Only include tasks that are relevant to your software system.

Do NOT include tasks such as "Update the Project Plan" or "Create Project Video."

Delete this textbox.

Questions?

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