For Lab Session: Thursday, April 18, 2013 in Towne 311.
Due: Wednesday, April 24, 2013 by 12:00pm.


Objective: Design an IP brokering business framework.

Prelab Requirements: Download and read this lab assignment. We recommend you read through the lab assignment before arriving in lab.

Deliverable:

• Answers to the questions from the “Licenses” section
• Your group’s powerpoint slides
• One-page summary of your design (should be written individually)

Handin: All labs will be turned in electronically through the Penn Blackboard website. Go to the assignment submission link and follow the instructions. Your writeup should be a PDF file.

Exit Ticket: Present your pitch to the class, and vote for the pitch you’d most like to invest in.
Motivation

Today, we exist in a rapidly-changing IP marketplace. As was discussed in Lecture 13, IP is a business tool which can be used, sold, bought, traded, borrowed, and stolen, in exactly the same way that we would do with more tangible business assets.

This Lab session will guide you through the design of a business approach which handles IP, and should help you understand the challenges faced by developers wishing to use their IP to generate a profit. It should also help you to understand your role as both a user and producer of IP, both now and further in your future.

Goal

For this lab, you will pick out the key features of a range of different product licenses, compare them, and match up appropriate licenses to different types of product. You will research ways in which IP has been used to turn a profit, and come up with your own ideas for how this can be done. Finally, you will design your own system for helping IP developers make money from their ideas, and pitch your design to the rest of the class for feedback.

Lab Procedure Guide

Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>12:00PM</td>
<td>Assemble, get organized, locate partners.</td>
</tr>
<tr>
<td>12:05PM</td>
<td>In assigned pairs, read through the Apple App Store End User Agreement, and answer the relevant questions (“Licenses” section)</td>
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<tr>
<td>12:10PM</td>
<td>In assigned pairs, read through the Creative Commons License Descriptions, and answer the relevant questions (“Licenses” section)</td>
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<tr>
<td>12:15PM</td>
<td>In assigned pairs, brainstorm IP protection measures (“IP Protection” section)</td>
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<tr>
<td>12:20PM</td>
<td>In assigned pairs, brainstorm IP usage ideas (“Using IP” section)</td>
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<tr>
<td>12:25PM</td>
<td>Assemble into groups, get organized (“An IP Marketplace” section)</td>
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<tr>
<td>12:30PM</td>
<td>In assigned groups, discuss IP brokering framework (“An IP Marketplace - Discussion” section)</td>
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<tr>
<td>12:50PM</td>
<td>In assigned groups, assemble idea pitch &amp; powerpoint slides (“An IP Marketplace - Idea Pitch” section)</td>
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<tr>
<td>1:00PM</td>
<td>Present idea pitch to class</td>
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<tr>
<td>1:20PM</td>
<td>Voting &amp; crowning of winner!</td>
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Licenses

In the lecture, we looked at the main methods for protecting a piece of IP which are available for use in the USA. These methods grant the originator of the IP the right to exclude others from its use.

However, often we’d like to allow other people to use our IP - either by permanently allowing them the right to use it, or by some other agreement. One way that this can be done is through licensing.

You are likely familiar with licenses already; if you own a computer which runs Windows, Mac OS, or any other proprietary software, you’ve likely had to indicate that you accept the software’s end-user agreement. What’s actually in those end-user agreements? And why do we need them? Are they all the same?

To find answers to these questions, we’ll start by looking at a selection of different user licenses, and picking out the features that set them apart from one another.

First, look at the Apple App Store End User Agreement. The document is quite long, so just read clause (a).

Q1: Who can use this license?

Q2: Under what conditions (if any) can covered work be copied?

Q3: Under what conditions (if any) can covered work be used to create derived works?

Finally, we’re going to look at another different set of licenses. Read through each of the descriptions of the Creative Commons Licenses. You might notice that these summaries are considerably less dense and easier to read than the previous license.

Q4: Who can use these licenses?

Q5: For each of the cases below, suggest the most suitable Creative Commons license for the software:

(a) A simple egg-timer program which you’d like any user to be able to modify or incorporate into their own software. You don’t mind what the end user does with their version of the software, so long as they agree to credit you as the original author.

(b) A packet analyser which you’d rather wasn’t edited for nefarious purposes, but would still like to make available to everyone. You’d prefer it if no-one tried to sell it for a profit.
(c) A simple CAD program. The program is quite basic and you suspect it will need more features added to it in the future, but you'd like to make it freely available and allow users to add in the features that they need. You’d like all users of the program - and any derivatives - to acknowledge you as its original author, though otherwise you don’t mind what they do with it.

Q6: Which of the Creative Commons licenses most closely matches the Apple App Store End User Agreement? Give one way that this license differs from the Apple App Store End User Agreement.

**IP Protection**

Q7: Based on what we learned in the previous section and insights from the lecture, discuss the possible ways an author can protect their IP from being copied or appropriated. In your pair, write down at least four distinct methods. For each method, give an example of a piece of IP for which the method would be an appropriate protection measure.

**Using IP**

It’s not enough to merely come up with a piece of IP and adequately protect it - often, we are interested in using IP to generate profit in some way.

You and your partner have produced a piece of IP - perhaps a piece of Verilog code which describes the design for a new mp3 encoder. Your design is capable of encoding audio MP3 files in half the time taken by existing designs, and your simulations predict that it will use a fraction of the power consumption of other competing designs.

Assuming you’ve taken adequate steps to protect your IP, briefly brainstorm possible ways you could use your IP to make a profit. Write down at least three different strategies. You might like to have a look at the following websites for some inspiration:

http://www.shapeways.com/
http://www.kickstarter.com/
http://www.arm.com/
http://www.sculpteo.com

Of the various strategies brainstormed, which do you think would be the best strategy? What makes it better than the other strategies?
An IP Marketplace

Now that we have a better understanding of how to protect and profit from a single piece of IP, we can start thinking about the wider picture of IP trade that happens in today’s workplaces. You should hopefully also have a feel for the various different driving forces in play when handling a piece of IP: we would like to protect our IP, but also allow people flexibility to use it how they’d like. We might like to make money from it, but we might also like to make it available to as many people as possible.

In this section, you will form a team to design a business framework for brokering the exchange of IP between a large pool of “customers” (who would like to acquire IP) and a large pool of “contributors” (who are able to provide IP.) You will give a short five-minute pitch to the rest of the class (who will play the part of investors) giving an overview of your design and explaining why it is worth “investing” in. Once all groups have presented their pitches, we will vote on one scheme to “invest” in as a class - so make your pitch as convincing as possible!

Your framework should meet the following requirements:

- Contributors should be able to profit from their IP in some way
- Customers should have sufficient access rights to the IP such that they are able to remix it as they like (as in a number of the Creative Commons licenses)
- You as a business should be able to profit from the framework in some way

The IP can take any form you like - it could be a software library, a set of GUI icons, a collection of sounds or ringtones, a useful database (e.g. resistor color codes), a collection of hardware arithmetic circuits, or designs for a set of mechanical connectors. The framework you design will depend on the sort of IP you choose.

For this task, we will assign you to larger teams of nine students.

Discussion

Earlier in the Lab, we saw the End User Agreement for the Apple App Store. The App store is a framework which allows users to submit their IP (contributed apps) to the App Store, and earn a profit from sales of their app, whilst prohibiting the app to be changed by the customer in any way. A very different approach is taken by Thingiverse (http://www.thingiverse.com/), where users can submit their IP (contributed 3D models) to Thingiverse, and customers can download and modify their designs, whilst no profit is generated for the original creator of the IP. Your task is to design a scheme which is able to turn a profit (for you and for your contributors) whilst also allowing customers to remix your IP in some way or another - somewhere between the approaches taken by the App Store and by Thingiverse.
Here are some questions that you should discuss in your group:

- What kind of IP are you brokering?
- Who are your customers?
- Who are your contributors?
- How will you protect the IP of your contributors?
- How will you protect the IP of your customers?
- Do you as a business have IP that needs protecting? How will you protect it?
- How will your users make a profit? What form will this profit take?
- How will you profit?
- What value proposition will you make to your customers? (What service or product are you offering them?)

Bear in mind that you will have 20 minutes to discuss your idea, so try to keep your discussion focused on the problem. It might be useful to nominate a timekeeper in your group, who should keep track of time and warn the group whenever the discussion drifts off-topic.

**Idea Pitch**

You will need to present your idea to the rest of the class. Your pitch should be no longer than five minutes, and include accompanying powerpoint slides. A projector has been made available for your use. You may divide the presentation between your team as you like - you may choose one person to act as your speaker, divide the pitch between members of the group, or use your team members to help present ideas in any way you’d like.

Your pitch should give an overview of your framework and how it operates, indicating what type of IP is being brokered, who your customers and contributors are, and how you will profit from the scheme. Your investors are interested in **profitable** ideas, but they are also a very ethically-minded bunch, and are interested in ideas that **respect IP protection**. They will be swayed by **lively, creative** pitches, so make sure to keep your pitch upbeat and engaging!

To allow the sales pitch to be easily shared between all members of your team, we have created Google PowerPoint Documents for you to use. You can find your PowerPoint Document below:
After all groups have presented their pitches, you will have **two votes** for your favourite **two** pitches (which must be different pitches, i.e. you cannot vote for the same pitch twice.) If you wish, you may vote for your own pitch. We will announce the winner at the end of the Lab session.

**Deliverables**

- Answers to the questions from the “Licenses” section
- Your group’s powerpoint slides
- One-page summary of your brokering framework (should be written individually)