IT & Public Policy

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Course web

  - Announcements
  - Readings/schedule
  - Lecture archive
  - Backup for technology glitches
  - Project information
  - More on this shortly

Course expectations

- Do the reading prior to class
- Participate in class to the extent possible given the technology
- Produce a small-group term paper
  - A "balanced policy brief" on some topic within the IT & Public Policy sphere
  - We will wait a couple of weeks for course enrollment to stabilize
  - We will use a wiki to exchange ideas, form groups, and write papers

Tonight

- Catch the debate at 11

An experiment

- New course
- New instructor collaboration
- New sites (UCB and UCSD) joining two previous sites (UW and Microsoft)
- Double the number of sites
- Evolving technology

Threaded email archive

- Join through the course web
- Do it today!
- Currently ~34 UW, ~14 UCB, ~19 UCSD, ~9?
Procuring Knowledge  
An Introduction to  
IP Law and Economics

Introduction  
Two Frontiers

Work Both Sides of the Problem  
Open Source  
Data Warehousing  
Computer Security  
Incentives are Powerful!  
Hortatory Solutions & Laws

Introduction  
Two Sets of Tools

Legal Tradition  
Local Nuts-and-Bolts) Optimization  
Is-Ism  
Economics Tradition  
Global (Big Picture) Optimization  
Precision

Introduction  
Two Themes

Marginal Cost = Zero  
The Second Copy is Cheap!  
Jargon: "Non-Rival"  
Network Externalities  
I Care What You Buy.
Tonight

IP = 0

Intellectual Property ("IP")
Other R&D Institutions
Applications...
Database Policy
(Private-Public Partnerships)
(Academic Entrepreneurs)

A Right To Exclude
Some History
Late Medieval Origins
Statute of Monopolies (1524)
Patent & Trademark Office
Fashions in IP Law

Many Types
Patents, Copyright, SCPA, etc.

Many Proposals
Databases

No. Defendant Wins
Subject Matter?

Yes.

Liability
(Infringement)

Yes.

Defenses & Exemptions

Yes!

Relief

Yes!

Plaintiff Wins

No. Defendant Wins

No. Defendant Wins

Legal

Subject Matter?

Yes.

Patents:
* Products, Compounds,
  Machines, Processes . . .
** Life, Business Methods, Software?
* Novelty

Copyright:
* Expression, Not Ideas
* Writings, Plays, Movies, Digital Audio . . .
** Software?
* Creativity

Other Statutes - The Public Domain

Liability

Basic Concepts
  Breadth
  Duration

Patents
  Doctrine of Equivalents
  20 Years

Copyright
  Non-Exclusive Servitude
  Life + 70 Years

Defenses & Exemptions

Patents
  Reduction to Practice,
  M Use, First Sale Rule,
  Research, Duty of Candor,
  Estoppel & Laches.

Copyright
  Independent Invention, First Sale,
  Fair Use, M Use (?), Estoppel & Laches
Relief

Patents & Copyright
- Damages
- Preliminary Injunctions
- Permanent Injunctions
- Exemplary & Statutory Damages

Yes.

Trade Secrets

A Different Philosophy...

Subject Matter
- Commercially Valuable Secrets

Liability
- Secrecy, Improper Means, Duration

Relief
- Damages, "Headstart" Injunctions

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A Choice of Methods

**NO**
Dominant Solution!!!

What Are We Trying to Accomplish?
2. Maximize Net Social Value
   \[(v-c) > 0\]
3. Old Economy Prescription:
   \[P = MC\]

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What Are We Trying to Accomplish?
1. Ex Post Efficiency
   - "Deadweight Loss"
2. Ex Ante Efficiency
   - "Innovation"
3. Eliciting Privately Held Information
4. Agency Problems - Sponsors
5. Agency Problems - Researchers

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1. Ex Post Inefficiency
   a.k.a. "Deadweight Loss"
The Old Economy: “Markets are Efficient”

Price = MC

The Old Economy: “Monopoly”

Price > MC

The Old Economy: “Monopoly”

CS

π

DWL

Public Goods:
Non-Rival (MC = 0)
Excludable

Why P = MC Won’t Work
What IP Does

The New Economy: “Intellectual Property”

Limits of IP
Copyright History
Is IP Necessary?
Databases
Source Code
Music
Too Much IP?
Databases, DMCA, Software Patents...

Is IP a Monopoly?
P > MC
Doing Without
Ex Ante vs. Ex Post
Mitigating Deadweight Loss
Digital Rights Management

Economics

Economics

Economics

Economics

Economics
2. Ex Ante Inefficiency  
a.k.a. Innovation

\[ (v - c) = \pi \]

Incentive = \( \Pi \cdot V \)

What Incentive is Optimal?
Innovation vs. DWL
Intergenerational Issues
Races
Duplication
Waste
High Risk Research

Cumulative Innovation
Do We Need a Strong Commons?
The Licensing Argument
Software Patents

3. Eliciting Privately Held Information

Information About \( (v-c) \) is Dispersed.
Two Types of Information
Technical Feasibility - Java
Value to Consumers - The Internet
Limits on Information Sharing
4. Agency Problems - Researchers

What If Researchers ...

* Lie About (V - C)?
* Go to the Beach?

5. Agency Problems - Sponsors

What If The Sponsor Doesn't Pay?

* Patent Litigation?

Evidence

Are Patents Important?
Pathologies
  Patent Thickets
  The Commons
  Trolls

Other Choices

History
Examples
  Prizes
  Contract Research
  Grants
  Buy-Outs
Hybrids
  CRADAs
  Bayh-Dole
Prizes

1. Ex Post Efficiency
   No deadweight loss!!
2. Ex Ante Efficiency – “Innovation”
   You must know “v”!!
3. Eliciting Privately Held Information
   Directed Prizes (DARPA, X-Prize)
   Blue Sky Prizes (Google)

Contracts

1. Ex Post Efficiency
   No deadweight loss!!
2. Ex Ante Efficiency – “Innovation”
   You must know “(v-c)”!!
   Packet Switching
   Competitive bidding & second-price auctions.
3. Eliciting Privately Held Information

Grants

1. Ex Post Efficiency
   No deadweight loss!!
2. Ex Ante Efficiency – “Innovation”
   You know “c” before, “v” afterward!!
3. Eliciting Privately Held Information

4. Agency Problems – Sponsors
   Types of Prizes
   Commitment Strategies
5. Agency Problems – Researchers

An imperfect solution...
Databases

History
U.S.
Feist & Congress
Europe (1996)

U.S. Politics
IP as a Hidden Tax
Users vs. Sellers

Policy
The Paradox: Why Do We Have a Database Industry at All?
The Issue: DWL vs. More Innovation
The Evidence:
Who’s Been Injured?
What New Databases Would We Get?
The European Experiment

Advice to Congress
Options
Property Rules
Liability Rules
Misappropriation
The INS Case
Current Law
Prove It!