

CS305 - Social, Ethical, and Legal Implications of Computing

**- 3: Intellectual Property -
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The US Legal Framework

- Two sources of law: Congress, Courts
- Two kinds of law: Criminal, Civil
- Trials
- Right to appeal; grounds for appeal

Legal Framework for IP

- Four basic kinds of protection
 - Copyright
 - Patent
 - Trademark
 - Trade Secret
- Many goals for this framework

Copyright

- Covers an expression of a creative work
- Everything since about 1930
- Currently obtained by...creating
- Gives right to
 - Reproduce
 - Prepare derivative works
 - Distribute copies
 - Perform, Display
- Enforced by civil suit (mostly)

(Utility) Patents

- Covers a novel, useful idea
- Last 20 years
- Application process through USPTO
- Right to “practice” idea
- Enforced by civil suit

Trademarks

- Covers a distinguishing mark
- Last as long as in trade use
- Application through USPTO
- Right to use mark (c.f. Lanham Act)
- Enforced by civil suit

Trade Secrets

- Covers a “secret” (probably even if otherwise not protectable)
- Created by not disclosing
- Last as long as the secret stays secret
- Right to prevent employees etc from disclosing the secret
- Enforced by civil suit (mostly)

IP: Ethical and Social Issues

- What goals are served by current IP law?
Consider categories of IP that are currently not protected...
 - When does IP protection inhibit creation?
When does it encourage it?
 - From what ethical framework does a “creator's right” to control “his/her” IP flow? Is it universal?
 - What price is society willing to pay to “protect” IP? Is it technical? Social?

“Open” IP

- Movement for collective creation
- Typically focused around copyright, source code
- Idea: License away individual rights
- Two flavors:
 - Vanilla ala Creative Commons, Open Source
 - “Viral” ala GPL

Free Software

- RMS and the “Four Freedoms”
- The GPL as a legal hack
- Commercial business and the GPL
- Case study: The Linux kernel

Four Freedoms

- 0. Freedom to run the program as you wish.
- 1. Freedom to study the source code of the program and then change it so the program does what you wish.
- 2. Freedom to help your neighbour. That's the freedom to redistribute the exact copies of the software when you wish.
- 3. Freedom to contribute to your community. That's the freedom to distribute copies or modified versions when you wish.

Ethics of the Four Freedoms

- From what ethical framework do these freedoms flow?
- Are they stated in a way that biases the ethical case?
 - Robin Hood
 - Bitcoin
- Do they reflect a different understanding of “property”?

The GPL as a Legal Hack

- Already covered last week
- Ethics of legal hacking?
 - Sets bad precedent (c.f. kernel headers); encourages litigation (c.f. Busybox)
 - Can be risky (courts/lawmakers can wreak havoc with the framework)
- Following vs setting community norms
 - c.f. Bill Gates's Letter

Commercial vs Free

- The Free Rider problem (?)
- Commercial tech economy is incredibly valuable (IP is biggest US export)
- Where should the bar be set?

Too-brief history of UNIX

- A new kind of OS from AT&T
- UC Berkeley and BSD
- BSD entirely frees UNIX (c.f. SysV)
- MINIX, etc
- Early Linux
- Commercial Linux adoption
- Mega-GPL

Linux kernel

- OS kernel vs utilities
 - “GNU/Linux”
- Kernel interfaces, headers
- Kernel community
 - Consensus feedback both to and from
 - Conflicting goals
 - Open...but
 - The Benevolent Dictator

Final Questions

- Is the future open? Free? Mixed?
- What *should* the future be?
- What is the proper relationship between community effort and commercial effort?
 - Does everything have to be market-driven?
 - Does everybody just have to get along?
- All in all, this microcosm raises many of the same questions as modern tech society in general...