A Brief Tour of Software Intellectual Property: Licenses, Patents, and Copyrights

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John Tyler
Software Intellectual Property

- Copyright © (IP)
- Software License (Contract)
- “Copyleft” / Open Source (Contract)
- Patent (IP)
  - Patent Litigation
  - Patent “Trolls”
  - 2011 Patent Law Reform
What is Intellectual Property?

- Bundle of property rights
  - Buy / sell / trade / inherit / use as collateral
  - Exclude others
  - Control

- Property itself is intangible
Copyright

- Literally: “right to copy” some protected work
- Right to be credited
- Comes from the US Constitution
  - Art. I, Sec. 8, Clause 8

_TO promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries._
Copyright

- **Duration**
  - Originally 14 years, then work becomes public domain
  - Now 70 years after author’s death (thank you Disney)

- Must be an original work

- Typically applied to source code

- Automatic protection

- Can register with the US Copyright Office
  - Required to enforce in court

- Subject to “first sale doctrine”
Software License

- Licensed, not sold -> avoids “first sale doctrine”
- Based on Contract Law
- End User License Agreement (EULA)
- Legally binding, even if you don’t read it!
  - Within reason
Copyleft

- Protected work is non-restrictive
- Modified, extended work must also be non-restrictive
- Form of software license (i.e. contract)
GNU Public License (GPL)

- Latest GPLv3 released 2007
- Written by Richard Stallman
- FSF holds copyright to license text
- Key clause: derivative works must also be GPL
  - But what is a derivative work?
- LGPL: can link to other software under a different license
Open Source

- Free as in speech (open source) vs
- Free as in beer (freeware)
- Common FOSS licenses:
  - BSD
  - Apache
  - MIT
  - WTFPL: Do What The F*ck You Want Public License
Patent

- Based on an “invention”
- Comes from US Constitution
- Gov’t grants a temporary monopoly
  - Prevent others from using
  - Can require license agreements ($$) for use
  - 20 years after filing
- After expiration, becomes public domain
Patent

- 35 U.S.C. §101

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- Invention must be non-obvious
- Invention must be novel
- Consider “prior art”
What’s With All These Patent Suits?

- Apple vs Android OEMs
  - Android a clone of iOS?

- Oracle vs Google
  - Android violates Java patents?

- Microsoft vs Android OEMs

  *Microsoft estimates it now gets a cut of the revenue of over half of Android smartphones.*
What US Patents Are Being Contested?

5,579,517 ('95) – short / long filenames
6,621,746 ('02) – erasing dirty segments of flash memory
6,826,762 ('01) – 3G Radio Interface Layer (API)
6,909,910 ('02) – Add a contact from your call log
7,644,376 ('04) – Notification system
5,664,133 ('96) – Context-sensitive pop-up menu
6,578,054 ('98) – File caching and reconciliation (e.g. Google Docs or Dropbox)
5,946,647 ('96) – A system and method causes a computer to detect and perform actions on structures identified in computer data.
Patent “Trolls”

- Non-practicing Entities
- Patent Holding Companies
- Nathan Myhrvold & Intellectual Ventures
- Marshall, TX ??
Patent Law Reform of 2011

- Leahy-Smith America Invents Act (AIA)
- First-inventor-to-file
- Post-grant review
- Prior use rules
- More patent examiners, more offices