

Intellectual Property and Open Source Software

Glen Newton
CSI2911
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Overview

- My background / relevance
- Copyright
- Patents
- Licensing
- Open Source Software

My background / relevance

- NRC researcher / software developer
- OSS user since 1986; Linux user since 1994
- OSS advocate
 - Member of NRC Open Source Committee
 - Member of GOSLING (**G**etting **O**pen **S**ource **L**ogic **I**Nto **G**overnments)

Copyright

- *“...is a legal concept, enacted by most governments, giving the creator of an original work exclusive rights to it, usually for a limited time. Generally, it is "the right to copy", but also gives the copyright holder the right to be credited for the work, to determine who may adapt the work to other forms, who may perform the work, who may financially benefit from it, and other, related rights.” - [Wikipedia](#)*
- Is applicable to the *expression* of an idea, not the idea itself
- Originally created to be applied to text, like books, articles, etc.

Copyright

- Can be shared
- Transferable / licensable
- Usually inheritable
- Usually authors life +[50|70|n] years
 - after which the work enter the [Public Domain](#)
- Ownership issues: [Work for hire](#)

Copyright: Fair use/Fair dealing

- Some copying allowed, as defined by fair use (U.S.) / fair dealing (Most Commonwealth)
- Depends on country; sometime explicit through legislation, sometimes established through the courts

Canadian Copyright

- Moral Rights
 - attribution
 - right to publish anonymously or through a pseudonym
 - integrity of work ("*alteration, distortion or mutilation*")
 - cannot be assigned (transferred) but can be waived
- Duration: author + 50yrs
- Facts and ideas not copyrightable

Canadian Copyright: Fair Dealing

- Six criteria
 - purpose
 - character
 - amount
 - alternatives to the dealing
 - nature of the work
 - effect of the dealing on the work

Copyright: Implications for software

- Software code (and binary) is copyrightable
- New implementations are possible, but precautions are needed (“[clean-room design](#)”)
- Copyright ownership of code (see *work for hire*)

Patents

- “...a right granted to anyone who invents or discovers any new and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof.” - [Wikipedia](#)
- Intended to promote innovation through disclosure
- Evaluation: should be novel, non-obvious to expert, etc.

Patents

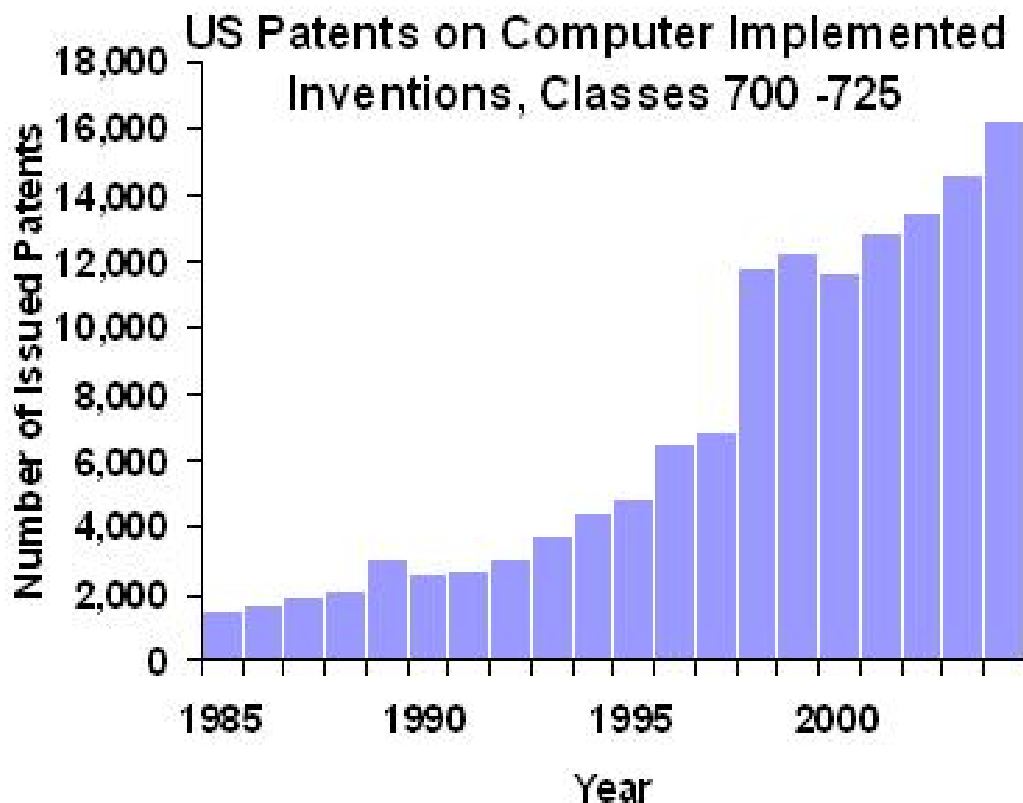
- Negative right: excludes others from producing, using, selling, importing, etc.
- Duration: usually 17-20 years
- Licensable, assignable, transferable
- Nullified by [Prior art](#)
- [First to file](#) vs. [First to invent](#)

What is [Patentable](#)?

- Originally physical devices that could be manufactured
- Some countries (U.S. & others) now allow business processes, mathematical processes, algorithms and software, etc.
- European Patent Convention [rejects](#):
 - (a) *discoveries, scientific theories and **mathematical methods***;
 - (b) *aesthetic creations*;
 - (c) *schemes, rules and methods for performing mental acts, playing games or doing business, and **programs for computers***;
 - (d) *presentations of information*.

Software Patents

- U.S & others allow software patents
- Minefield for anyone developing software
- Unfortunately, the “novel” and “non-obvious” criteria for evaluation often not well applied
- Problematic: effectively stifles innovation due to the much shorter innovation cycle in software



Software Patents: Example: RIM & NTP

- NTP: patent house
- NTP claimed RIM infringed 8 patents
- RIM claims prior art
- RIM stock plummets
- RIM order by U.S. courts to shut down Blackberry service; DoD intervenes
- Settled for US\$600M

Licensing

- Allows owner of IP to release some rights to other party
- Patent license: allows other party to use patent usually in exchange for royalties (flat rate or per item produced)
- Copyright license: allows other party to sell, copy etc. copyright holder's work

Free/Libre/Open Source Software

- Licenses that extend rights to users beyond copyright
- Free Software vs. Open Source Software
- Richard Stallman & Free Software Foundation: political

Free Software

- *Four points of software freedom*
 - *The freedom to run the program, for any purpose (freedom 0).*
 - *The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.*
 - *The freedom to redistribute copies so you can help your neighbor (freedom 2).*
 - *The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this.*

<http://www.gnu.org/philosophy/free-sw.html>

Open Source Software (1)

- *Free Redistribution: the software can be freely given away or sold. (This was intended to encourage sharing and use of the software on a legal basis.)*
- *Source Code: the source code must either be included or freely obtainable. (Without source code, making changes or modifications can be impossible.)*
- *Derived Works: redistribution of modifications must be allowed. (To allow legal sharing and to permit new features or repairs.)*
- *Integrity of The Author's Source Code: licenses may require that modifications are redistributed only as patches.*

Open Source Software (2)

- *No Discrimination Against Persons or Groups: no one can be locked out.*
- *No Discrimination Against Fields of Endeavor: commercial users cannot be excluded.*
- *Distribution of License: The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.*

Open Source Software (3)

- *License Must Not Be Specific to a Product: the program cannot be licensed only as part of a larger distribution.*
- *License Must Not Restrict Other Software: the license cannot insist that any other software it is distributed with must also be open source.*
- *License Must Be Technology-Neutral: no click-wrap licenses or other medium-specific ways of accepting the license must be required.*

http://en.wikipedia.org/wiki/Open_source#The_Open_Source_Definition

FLOSS Licenses

- Many, with various restrictions
- Most popular: GPL, LGPL, Apache, MIT, Mozilla, BSD

FLOSS & Patents

- Major issue
- Microsoft [claims](#) Linux violates 235 of its patents

Ethical Implications of FLOSS

- Use of FLOSS by commercial entities not aware or ignoring license
- Implications on ability to distribute products
- FSF has a lawyer: [Eben Moglen!](#)



Questions?