



Computers and Society

Intellectual Property
and Licensing Issues



What We Will Cover

- Intellectual Property and Changing Technology
- Copyright Law and Significant Cases
- Responses from the Content Industries
- Search Engines
- Free Software

What is Intellectual Property (IP, 知識產權)?

- The name given to a group of separate intangible property rights
- Value of intelligence and artistic work comes from creativity, ideas, research, skills, labor, non-material efforts, and attributes the creator provides

What is Intellectual Property (IP)?

- These rights include:
 - Trademarks (商標權)
 - Patents (專利權)
 - Copyright (版權)
 - Designs (外觀設計權)
 - Plant varieties (植物品種保護權) (!)
 - Layout design of integrated circuits (集成電路布圖設計權)



IP Appears Everywhere


- Brand-name logos on your T-shirt
- Newspaper articles
- TV programmes
- Pop songs
- Movies
- Fashion designs
- ...



What is Protected?

- Not all ideas, inventions, or creations are protected.
 - A pharmaceutical invention may be protected by patent registration
 - A special medical treatment of a disease is not protected

What is Protected (by Copyright)?

- Copyright does not protect ideas, but protect the **expression of ideas** 
- It is *not* necessary to applied for a copyright
 - A work is automatically under protection when it is created



Copyright

- Copyrights lasts for a limited time only
 - E.g., 50 years after the creator dies
- After that, the work is in the public domain
 - Anyone can freely copy and use it

What is Protected (by Copyright)?

- Copyright holders have exclusive rights to:
 - Make **copies**
 - Produce **derivative works** (e.g., translations into other languages or movies based on books)
 - **Distribute** copies
 - **Perform** the work in public (e.g., music, plays)
 - **Display** the work in public (e.g., artwork, movies, computer games, video on a Web site)





Challenges of New Technologies

- Digital technology and the internet has made copyright infringement easier and cheaper
- New compression technologies have made copying large files (e.g., graphics, video and audio files) feasible
- New tools allow us to modify graphics, video, and audio files to make derivative works
- Scanners allow us to change the media of a copyrighted work, converting printed text, photos, and artwork to electronic form



IP and Technologies: Discussion

- How is intellectual property like physical property?
- How is intellectual property different than physical property?
- Do you agree with the idea that someone can "own" intellectual property?



The Basic Law and IP

- The Government... shall... **protect** by law:
 - Achievements in scientific and technological research, patents, discoveries and inventions. (Article 139)
 - Achievements and the lawful rights and interests of authors in their literary and artistic creation. (Article 140)

Copyright Law

為鼓勵知識創作授予作者及購買者就其已印刷成冊的圖書在一定時期內之權利的法案

○ Some history:

- Statue of Anne 1709 (Britain): the world's first copyright law
- 1790: the first copyright law in the United States
- 27 June 1997: Copyright Ordinance in Hong Kong come into effect
 - Before then, British laws were used
 - Amendments in 2001, 2003, 2004, 2007, 2009



Copyright in Hong Kong

- Hong Kong is also parties of various international conventions and treaties
 - Berne Convention 保護文學和藝術作品伯爾尼公約
 - Universal Copyright Convention
 - Phonograms Convention
 - 錄音製品
 - ...

IP Related Departments in Hong Kong

- Intellectual Property Department (知識產權署)
 - provides trademark, patent, and design registration services in HK
 - promotes awareness of IP
- Customs and Excise Department (香港海關)
 - Takes criminal 制裁 sanctions against copyright and trademark infringements



Copyright Law in Hong Kong

- Tries to maintain a balance between:
 - The rights of copyright owners for adequate payment for the use of their works
 - The rights of society as a whole to have access to ideas and information
- Also protects works available on the Internet and computer software

How are Worked Protected?

- Copyright works are protected through:

- Civil Remedies (民事補救)

文字 ○ injunction, order for delivery up of the infringing items, award for damages as well as costs, ...

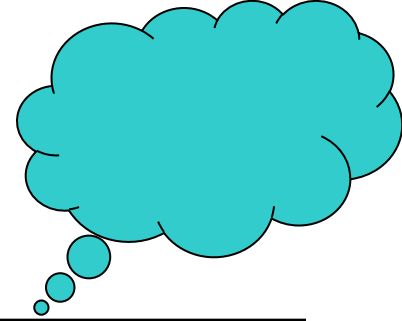
- Criminal Sanctions (刑事制裁)

- Customs and Excise Department (海關) is responsible for enforcing criminal aspects

Any Copyright Exceptions?

- “Fair dealing” (公平處理) exemptions:
- Have to consider *all* of the following:
 - Purpose and nature of the dealing (non-profit or commercial purpose)
 - Nature of the work
 - Amount of significance or portion used
 - Effect on the potential market and value of the work
- Not all factors are in equal weight
- Similar to “fair-use” doctrine in USA

Fair Dealing: Yes or No?



- A student copying a small portion of copyright work and incorporating it in his project for illustration with acknowledgment of the source
- A student copying a large portion of a textbook because the textbook is too expensive
- **Note:** copied made under “fair dealing” must not be sold, lent, or hired to others!

Significant Cases in US

- Sony vs Universal City Studios (1984)
 - Universal sued Sony for contributing to copyright infringement because some customers used Sony's video cassette recorder to record movies shown on TV
 - The court decided that:
 - Device makers with *legitimate* uses should not be penalized because some use it to infringe
 - Copying movies for later viewing was *fair use*



Significant Cases: Sony vs Universal

- Arguments against fair use:
 - People copied the entire work
 - Movies are creative, not factual work
- Arguments for fair use:
 - The copy was private, non-commercial, and generally was not kept after viewing
 - Universal could not demonstrate they suffered any harm
 - Universal received broadcasting fee from TV stations



Significant Cases in US

- Sharing music: the Napster case
 - In 1999, Napster opened a service on the web to allow users to copy MP3s from other users' hard disks
 - Record companies sued Napster for copyright infringement
 - The record companies won. Napster shut down afterwards



Significant Cases: Napster

- Was the sharing of MP3s via Napster fair use?
- Arguments for fair use:
 - The Sony decision allowed entertainment use to be considered as fair use
 - Did not hurt industry sales because users sampled the music and bought the CD if they liked it



Significant Cases: Napster

- Arguments against fair use:
 - “Personal” means very limited use, not exchanging with strangers
 - Songs and music are creative works and users copied whole songs
 - Record sales were hurt severely
- The court decided that sharing music via MP3s violated copyright



Significant Cases: Napster

- Was Napster responsible for the actions of its users?
- Arguments for:
 - Napster was the same as a search engine
 - They did not store any MP3s
 - The technology has substantial legitimate uses
- Arguments against:
 - Companies are required to make an effort to prevent copyright violations, and Napster did not take sufficient steps
 - Napster was not a device or new technology



Significant Cases: Napster

- Was Napster responsible for the actions of its users?
- Court's view:
 - Napster was liable because they had the right and ability to supervise the system, including the copyright-infringing activities
 - Napster makes money from this business



Significant Criminal Case in HK

- File sharing using BitTorrent (BT):
 - A man was accused of uploading 3 movies onto the Internet using BT in 2005
 - He was charged with “distributing an infringing copy of a copyright work ... to such an extent as to affect prejudicially the copyright owner”
 - The charge was convicted, becoming the world’s first criminal case of illegal mass distribution of copyright work using BT sharing
 - He was sentenced for 3 months in prison

Significant Criminal Case in HK: BT

- Arguments for:
 - “Copies” only refers to tangible objects like CDs and tapes. Digital files don't count
 - It is the downloader that initiated the transfer. He merely put it on the net
- Arguments against:
 - Copying does not necessarily involve tangible objects
 - He kept his computer connected to the Internet and his BT client opened



Significant Cases: Discussion

- What would be the impact on the creative industries such as music, movies, and fiction novels, if copyright laws did not protect their intellectual property?
- Do you think that copyright lawsuits have been used to stifle innovation. Why or why not?

Responses from the Content Industries

- Ideas from the software industries
 - Expiration dates within the software
 - Dongles (a device that must be plugged into a computer port)
 - Copy protection that prevents copying
 - Activation or registration codes
 - Obtain court orders to shut down web sites with copyright infringing contents





Responses from the Content Industries

- Banning, suing, and taxing
 - Ban or delay technology via lawsuits
 - CD recorders, DVD players, portable MP3 players, ...
 - Requiring new technology include copyright protections
 - Tax digital media to compensate the industry



Responses from the Content Industries

- Digital Rights Management (DRM)
 - Collection of techniques that control uses of IP in digital formats
 - Includes hardware and software schemes using encryption
 - The file producer has flexibility to specify what a user may do with it
 - Apple, Microsoft, and Sony all use different DRM schemes
 - Disadvantage of DRM: prevents fair dealings

DRM, its Circumvention, and Innovation

- People often find ways to “circumvent” DRM and other copy-protection schemes
- HK copyright law now prohibits:
 - [making/importing/exporting](#) circumvention device (規避器件) for sale/hire,
 - dealing in such devices or [providing](#) commercial circumvention [service](#)
- This is controversial, as copyright owners can sue a person/company even if one/it does not infringe any copyrights



Video Sharing

- With the advancement of the Internet speed, video sharing has become popular in recent years
 - YouTube, Youku, Tudou, ...
- Conflict and solutions of video sharing:
 - Industry issues “takedown” notices
 - As long as sites comply with takedown notices, they are not in violation
 - Takedown notices may violate fair dealing (e.g., for education purpose)

New Business Models

- New business models have evolved
 - Organizations are set up to collect and distribute **royalties** (版税)
 - Users do not have to find individual copyright holders
 - Sites provide legal means for obtaining inexpensive music and generate revenue for industry and artists
 - Revenue sharing allows content-sharing sites to allow the posting of content and share their ad revenues with content owners



Royalties (Licensing Fees)

- Well-known licensing bodies in HK:
 - International Federation of the Phonographic Industry (Hong Kong Group) (IFPI HKG)
 - Hong Kong Recording Industry Alliance (HKRIA)
 - Composers and Authors Society of Hong Kong (CASH)



Search Engines

- Caching and displaying small excerpts is fair use
- Creating and displaying thumbnail images is fair use
- Since 2004, Google has scanned millions of books and display excerpts online
 - They just won a lawsuit in 2013 by authors who accused them of digitally copying books for online library without permission. (Appeal expected though)

Ref: <http://www.reuters.com/article/2013/11/14/us-google-books-idUSBRE9AD0TT20131114>

Free Software

- An idea and ethic advocated and supported by a large loosing-knit group of programmers
 - GNU project, Free Software Foundation, ...
- Allow people to copy, use, and modify their software
- “Free” means **freedom of use**, not necessarily free of cost
- **Open-source** vs **proprietary** software
 - Linux kernels, Android, OpenOffice, Firefox, ...



Should all Software be Free?

- Would there be sufficient incentives to produce huge quantity of consumer software?
- Would the current funding methods for free software be sufficient to support development?
- How can free software be fitted into existing copyright laws?
 - Concepts such as “copyleft” and GNU General Public License (GPL) provide means to fit in the current legal framework

Copyleft ©

- Under copyleft, the developer copyrights the program and releases it to allow people to:
 - Use, modify, and distribute it,
 - Or distribute any program developed from it, but only if they apply such same agreement to the new work
- Copyright ©: “All rights reserved”
- Copyleft ©: “All rights reversed”
- Public domain: “No rights reserved”

Creative Commons (CC, 共享創意)

- Inspired by GPL, CC developed a spectrum of licensing agreements for creative works (not just software)
 - Replacing “all rights reserved” with “some rights reserved”
- E.g., provide options to:
 - allow copying for noncommercial use,
 - require a specified credit line with use,
 - allow use of entire work with no changes
 - ...





Software: Discussion

- The End User License Agreement (EULA) of a proprietary software usually allows you to install the software on one computer only.
- How is this counted if you installed it on a **virtual machine**?

Using Internet Contents

- Make sure you use Internet resources legally!
 - E.g., extracting the whole or large part of a news article for personal use is generally **illegal**, even if you cite the article source
- Some content sharing websites provide resources in public domain or under CC license:
 - Wikipedia:
<http://www.wikipedia.org/>
 - Wikimedia commons:
<http://commons.wikimedia.org/>
 - Public Domain Images:
<http://www.public-domain-image.com/>



Assigned Reading

- Intellectual Property Department - Copyright in Hong Kong
 - http://www.ipd.gov.hk/eng/pub_press/publications/hk.htm

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