

Promotion of Open Innovation/Open Source in an IP Eco-System

Dr Stanley Lai
Head
Intellectual Property & Technology
Department

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Issues

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- The IP Eco-System
- Current Trends
- What can be subject to an open source licence?
- Open Source v Proprietary Platforms
- Open Source in Litigation
- Paradigm Shift
- Continued Relevance of Intellectual Property
 - Copyright
 - Trademark
 - Patents
- Contractual Analysis
 - The interface with Intellectual Property Rights
 - Difficulty with derivative works
 - GPLv3
 - Licence Compatibility
- Different licences
- Conclusions

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IP ECO-SYSTEM

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- Balances Rights and Exceptions (right-specific)
- Have we got the balance right?
- Article 9(2) Berne Convention and subsequent enactments. Strong rights tampered by an expanding and evolving fair use doctrine.
- Those who eschew the exclusionary principles upon which proprietary IP business blueprints are based are forced to turn to the IP licence as a means of achieving their aim.
- The Open Source movement seeks to predicate software development on freely available code, but it must rely on what is in effect an IP licence to achieve its objectives.

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Current Trends

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- "There is definitely an increase in the adoption of open-source software [in Singapore] for good reason. Businesses are becoming more aware that they have the choice, without the technology, licensing and financial lock-ins of proprietary systems."
 - Harish Pillay, Red Hat Asia-Pacific
(November 2007)

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Current Trends

- In October 2004, the Ministry of Defence began using the OpenOffice application suite rather than updating Microsoft Office.
 - Cheok Beng Teck, the director of the office of the ministry's chief information officer: "the additional features [of Microsoft Office 2003] could not justify the high cost."

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What can be subject to an Open Source Licence?

- Typically applied to software, but the categories of works (that may classified as open innovation) can be open sourced are not closed.
- Music, e.g. www.opsound.org
 - "All sounds in the Opsound pool are released under the Creative Commons Attribution-ShareAlike license (a copyleft license similar to those used in the free and open source software communities) or are placed in the public domain (the license information for each song can be found under the song link)."
- Documents and written text, e.g. Wikipedia
 - "All text is available under the terms of the GNU Free Documentation License."
- Photography, e.g. www.openstockphotography.org
 - "All images listed at Open Stock Photography come from Wikimedia Commons and as such "can be used by anyone, for any purpose"."

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Commons and Layers

- “Commons and Layers will be the building blocs that reveal the internet’s effect on society.”
 - Lawrence Lessig, *The Future of Ideas*

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Commons

- The resource to which anyone within the relevant community has the right to material without having to obtain the permission of anyone else.
- The internet forms commons not just through norms, but also through specific technical architecture. This is the space where creativity can flourish.

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Layers

- Reference to the different layers within a communication system. Conceptualised by Prof Yochai Benkler (Federal Communications Law Journal 52 (2000) 561 at 562-3)
- Three basic layers
 - Physical Layer (where communication travels)
 - Code layer (code which runs hardware run; internet protocols, etc)
 - Content layer (sound, text, images, video on-demand, etc)
- The sum alteration of each layer calibrates copyright's governance of digital content.

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Open Source Licences vs Proprietary Platforms

- Derivation of 'Open Source'
- First introduced in 1998 by two software developers, Bruce Perens and Eric Raymond.
- 'Open' reflects the essence of the phenomenon of keeping source code open, available and visible to everyone who wants to see and understand it.
- General Public Licence was access-ensuring; prohibits copying and distribution of software unless accompanied by the complete corresponding source code.
- "Some rights reserved", as opposed to "all rights reserved".

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Open Source Licences vs Proprietary Platforms (Cont'd)

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- GPL terms must also apply to modifications, new versions.
- When GPL software is combined with other software, the new program must be licensed on GPL terms.
- Viral effect of GPL:
 - when GPL software is combined with other software, the entire new program must be licensed under GPL or under a compatible licence.
 - “Copyleft”
 - Many derivatives spawned from this, like LGPL.
 - Clause 8 (GPLv3): those who propagate or modify a covered work except as expressly provided under the Licence automatically lose their rights to use the software.

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Open Source Licences in Litigation: *SCO v IBM*

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- In 2003 SCO (formerly known as Caldera Systems) filed a \$1bn law suit against IBM for devaluing its version of the UNIX operating system.
- SCO claimed that IBM had, without authorization, contributed SCO's intellectual property to the codebase of open source, the Linux operating system.
- It was held in August 2007, in a separate lawsuit, *SCO v. Novell*, that SCO was not in fact the owner of the copyright in UNIX. Novell was the rightful owner.
- As Novell did not take the view that there was UNIX in Linux, Novell waived the claim against IBM, thus disposing of the *SCO v. IBM* lawsuit.

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Open Source Licences in Litigation: the BusyBox Lawsuits

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- BusyBox is a set of standard Unix utilities commonly used in embedded systems. Open source software licensed under GPL version 2.
- **20 September 2007**
 - Software Freedom Law Center (SFLC) filed suit on behalf of the developers against Monsoon Multimedia Inc., after BusyBox code was discovered in a firmware upgrade.
 - Settlement: release of the Monsoon version of the source + payment of an undisclosed amount of money to the developers.
- **21 November 2007**
 - Similar lawsuits brought by SFLC against Xterasys and High-Gain Antennas.
 - Xterasys settled: release of source code used + undisclosed payment
 - High-Gain Antennas settled: active license compliance + undisclosed payment.

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Open Source Licences in Litigation: the BusyBox Lawsuits (Cont'd)

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- **7 December 2007**
 - Similar lawsuit brought against Verizon Communications over its distribution of firmware for Actiontec routers
 - Settlement: condition of license compliance + appointment of an officer to oversee future compliance with free software licenses + undisclosed payment.
- **9 June 2008**
 - Against Bell Microproducts and Super Micro Computer
 - Super Micro settled
 - Default judgment was awarded against Bell Microproducts: lost profits + penalties + legal costs.

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Paradigm Shift

- Commercial developers are turning to open source. Microsoft has begun making small contributions of code to open source communities.
- The shift is pragmatic – Microsoft customers can oversee LINUX servers with Microsoft's management software. Eventually LINUX and WINDOWS will run on the same machine.
- The Shared Source Initiative has released a handful of development-related products under an open source licence, including Windows Installer XML toolset WiX.
- Open Source developers also require powerful patrons – In January 2005 IBM agreed to make five hundred software patents available free to Linux as well as other open-source software projects.

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Intellectual Assets without Property?



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- There is no empirical evidence at all, on the question whether intellectual property laws stimulate the economically optimum quantity of intellectual assets.
- The internet, with its communal infrastructure, enables creation by users and also theft.
 - Wikipedia (75,000 volunteer contributors; 5 million + articles in over 100 languages)
 - Linux (open source software products that has been created, debugged and modified by thousands)
 - Procter & Gamble taps into wired communities of volunteers for feedback on products and suggestions for design alternatives.

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But the reality is.....

- IP retains its place as an instrument of control.
- Linux eschews a simple idea, but is institutionally complex in its implementation.
- Highlights the importance of property rules.
- Linux is distributed via GPL. It is non-commercial. But it is distributed commercially by Novell, Red Hat et al. It runs on Intel's proprietary chip architecture, and operates on proprietary software platforms.
- Linus Torvalds: "I dumped my old copyright and adopted the GPL"

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Relevance of Intellectual Property to Open Source



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GPL is still a Copyright Licence!

- Do 'viral' licences undermine IPRs?
- Is there an over-colonisation of IPR by commercial software developers?
- Nightmare scenario – where copyright infringing software is introduced into the market under open source terms. Mass distribution will follow.
- 'Fruit of the poison tree' doctrine will apply.

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Copyright Analysis

- Some licences do not deal with IPRs; contrast Apache licence (specific copyright and patent licences from all contributors to all users).
- As between A and C (and subsequent transferees) copyright enforcement may be the remedy following non-compliance with the terms of a licence.
- *Netfilters* decision – Munich court held that the defendant had breached clause 4 of the GPL. Following the breach, use rights were terminated, and the Defendant was subject to an action for copyright infringement. (contrary to section 97 and 67c German Copyright Act)

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Parties to the Licence

- A normal software licence runs directly from each developer that publishes a product to each end user of the product.
- With open source there are two separate stages of licensing;
 - Contribution stage: programmer produces a line of code that is contributed to an open source development project. Copyright rests either with the contributor or one of several non-profit entities such as the FSF that acquires copyright through an assignment.
 - Distribution stage: through an open source licence.

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Problems with Copyright Enforcement

- Non-exclusive licensees cannot bring an action by themselves.
- Vanishing copyright licensor (A) – assigning copyright to an ‘enforcement’ authority may be a solution.
- OS licensees are vulnerable where copyright is assigned by the licensor to a purchaser for value without notice and the assignee proceeds to revoke the licensee.
- Copyright in adaptations or derivative works? Eg. B creates a sufficiently modified from A’s code so as to create original copyright in its own right (*Virtual Map* decision; *Ibcos v Barclays*).
- GPL programs never remain static.

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Open Source Licences and Trade Marks

- An Open Source Licence is not a Trade Mark Licence
 - E.g. Mozilla (<http://www.mozilla.org/foundation/licensing.html>)
 - “Although our code is free, it is very important that we strictly enforce our trademark rights, in order to keep them valid. Our trademarks include, among others, the names Mozilla®, mozilla.org®, Firefox®, Thunderbird™, Bugzilla™, Camino®, Sunbird®, SeaMonkey®, and XUL™, as well as the Mozilla logo, Firefox logo, Thunderbird logo and the red lizard logo. (The full list is in the Mozilla Trademark Policy.) This means that, while you have considerable freedom to redistribute and modify our software, there are tight restrictions on your ability to use the Mozilla name and logos, even when built into binaries that we provide.”

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Open Source Licences and Trade Marks (Cont'd)

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- OSI is registering the Open Source Initiative Approved License trademark, and making it available for use with qualifying software projects.
 - “To be eligible to use the mark, you must:
 - Only use the term "Open Source" to refer to software distributed under an OSI Approved License.
 - Only use the OSI Approved License mark on a page -- or clearly defined sub-page -- that only contains software distributed under a current OSI Approved License.”



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Curtailment of the Patent Rights of Contributors

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- Recent OS licences require specific copyright and patent licences from all contributors to users. (eg. Apache licence, Common development and Distribution licence)
- §2.1 Mozilla Public Licence – limits the patent grant of the initial developer to cover patents that are necessary to the use of the original code.
- §2 IBM's Common Public Licence – excludes from the patent grant a licence to any patent not issued at the time of the contribution, even if the application was already on file.
- GPLv3 (to be discussed later).

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How OS licences now deal with the Risk of Patent Infringement

- Proprietary licences usually indemnify users against patent claims that are filed by third parties.
- With OS, the 'licensor' of any particular program is often a distributed body of difficult-to-identify contributors. The risk is placed squarely on the users.
- Some licences carry a warranty of 'provenance', in which the contributor states that it 'believes' that its contributions are its original creations and non-infringing.
- Great variations in the provisions which focus on 3rd party IP; there is more conscious attention to patent rights. The patent-free open source movement is a myth.

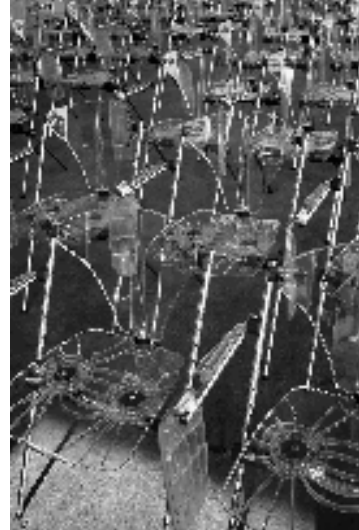
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Commencement of any Patent Litigation will lead to a Loss of Rights

- §8 Mozilla Public Licence - Any action claiming that a contributor's version of the software violates a patent will result in a termination of the plaintiff's rights to use that version of the software.
- See §12.1(c) Apple Public Source Licence which terminates "if You...commence an action for patent infringement against Apple, provided that Apple did not first commence an action for patent infringement against You."
- Not just the protection of products, but this would bring OS products within the cross-licensing equilibrium that has provided stability to the proprietary segment of the industry for some time.
- May be a disincentive to companies with large patent portfolios, who may have to forgo claims for products unrelated to the open source project in which they are participating.

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Contractual Analysis



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Contractual Analysis

- German *Netfilters* decision points to contractual and copyright enforcement of open source licences.
- A introduces software into a licence with B on GPL terms; A charges money for the initial licence. B redistributes on GPL terms after making modifications.
- A contract exists based on B's acceptance of terms that are sufficiently brought to his notice.
- B's subsequent transfer to C on GPL terms. Acceptance by C, but A cannot demand payment from subsequent transferees. Consideration may be ostensibly absent to found a binding contractual licence between A and C.

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Re-Defining Contractual Consideration

- ‘Viral’ provisions may constitute consideration moving from the licensee.
- There is a forbearance on the part of the licensee from exploiting GPL’d software in a certain way; (eg. not releasing adaptation or modified copies under closed source terms). This is arguably sufficient consideration. (observance of GPL conditions)

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Terminology: Modified Version, Derivative Work or Adaptation?

- Open Source Licensing operates on the premise that there should be freedom to share and change all versions of a program so that it remains free for all users.
- Different licences may use different concepts to describe what these “other versions” of a program could be.
- E.g. GPLv3 uses the term “modified version”
 - “To “modify” a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a “modified version” of the earlier work or a work “based on” the earlier work.”

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Terminology: Modified Version, Derivative Work or Adaptation? (Cont'd)³²

- Not all open source licences may define the concept in such detail.
- The definition of “modified version” links to copyright standards – how far does the “modified version” concept gel with corresponding copyright concepts in different jurisdictions?

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Terminology: Modified Version, Derivative Work or Adaptation? (Cont'd)³³

- E.g. “Derivative Work” in the United States (17 U.S.C. § 101)
 - A “derivative work” is a work based upon one or more pre-existing works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a “derivative work”.

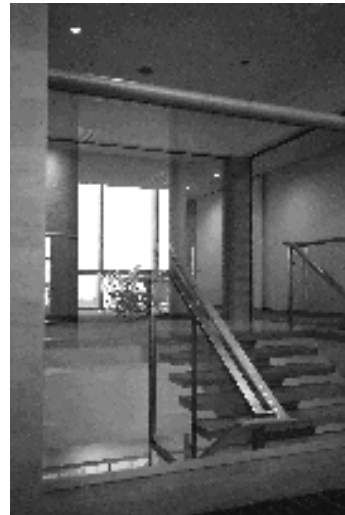
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Terminology: Modified Version, Derivative Work or Adaptation? (Cont'd)

- E.g. "Adaptation" in Singapore (Copyright Act, s. 7)
 - (a) in relation to a literary work in a non-dramatic form, means a version of the work (whether in its original language or in a different language) in a dramatic form;
 - (b) in relation to a literary work in a dramatic form, means a version of the work (whether in its original language or in a different language) in a non-dramatic form;
 - (c) in relation to a literary work being a computer program, means a version of the work (whether or not in the language, code or notation in which the work was originally expressed) not being a reproduction of the work;
 - (d) in relation to a literary work (whether in a non-dramatic form or dramatic form), means —
 - (i) a translation of the work; or
 - (ii) a version of the work in which a story or action is conveyed solely or principally by means of pictures; and
 - (e) in relation to a musical work, means an arrangement or transcription of the work.

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Different Forms of Open Source Licences



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Starting Points of differentiation

- Generic Types of Open Source Licences
 - Free-for-all open source (credit the origin)
 - Keep-open OS licences (must share modifications)
 - Share-alike open source (sharing modifications and extensions)
- Major points of differentiation
 - Constraints of incorporating licensed code in later products
 - Rules about the contribution of IP rights related to contributed code
 - Enforcement of IP rights by users of the software

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	Features

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