

# **Open Source: Software, Biotech & Beyond**

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**[ipblog.ca](http://ipblog.ca)**

The advantages and disadvantages in open source licensing, starting with open source software and moving on to non-traditional "open" licensing models in biotechnology and life sciences.

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# Overview

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  - Types of Open Source Licenses
  - Benefits & Risks of Open Source / Managing the Risks
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- What is Open Source Biotechnology?
  - License Terms
  - Examples
  
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# What is Open Source?

## Open Source Software (OSS):

- software whose source code is governed by certain license terms which mandate that the code is made available to be used, copied, modified and distributed
- also known as “free software” (free as in *liberty* not *price*)
- examples: General Public License (GPL)
- <http://www.fsf.org/licensing/licenses/>



# Open Source Software (OSS):

## **Freedom to:**

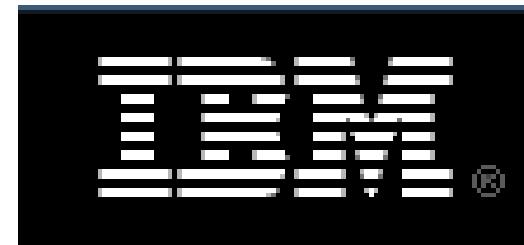
- run the software;
- study & adapt the software;
- redistribute copies so users can share knowledge and assist each other; and
- improve the software, and release source code versions of improvements to public.

# Open Source Software (OSS):

## Companies Using Open Source



**ORACLE®**



# Open Source Licenses:

## OSS License Types:

- Viral vs. Non-Viral

The term “*viral*” refers to the ability of the license terms to “infect” or “contaminate” code which is derived from, linked to or commingled with the incoming code subject to the OSS license.

A “*non-viral*” license (or academic license) does not “infect” commingled code. The MIT license, the Berkeley Software Distribution (BSD) license, Apache and the Academic Free License (“AFL”) are all examples of non-viral licenses.



# Open Source Licenses:

## OSS License Types: Viral

- Viral (“copyleft” or reciprocal license)

The license necessarily obliges the author to disclose and license all source code: both originally-authored and incoming code. GPL section 2:

“You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.”



# Open Source Licenses:

## OSS License Types: Viral

More restrictive: any code which is derived from or commingled with the originally-licensed code can only be redistributed on the same terms as the original license. The derived or commingled code is “infected” by the license terms which govern the original code.



# Open Source Licenses:

## OSS License Types: Non-Viral

- Non-Viral

BSD license captures the liberal terms of “non-viral” license:

“Redistribution and use in source and binary forms, without or without modification, are permitted. . .”

The modified or derived code can be distributed under open or free licenses or can be taken private and distributed under proprietary or “closed” licenses.



# Open Source Licenses: Managing the Risks

Benefits: advantages of building on existing tools and platforms; access to a “pool” of expertise

Risks are that the license terms which govern the incoming OSS code will “infect” your proprietary code



# Open Source Licenses: Managing the Risks

***May*** result in:

Obligation to release source code to general public

Loss of trade-secret information and advantages in marketplace

Negative impact on investor interest



# Open Source Licenses: Managing the Risks

Look at:

The use being made of the code (is it *internal only* or for *commercialization / out-licensing*)

The license terms which apply to the incoming code

The co-mingling or enmeshing that is taking place

# Open Source Licenses: Managing the Risks

Consider adding Open-Source Reps & Warranties:

“The Contractor represents and warrants that *Deliverable Code* does not and will not include any source code which is subject to any ‘free’ or ‘open-source’ license terms other than the code and the licenses listed in Schedule X”

# Open Source Licenses: Tips & Examples

## Five Quick Tips:

1. Be Open Minded: Lawyers With Clients and Employers with Employees
2. Determine Which License Applies: “All licenses are equal but some are more equal than others”
3. Due Diligence on Code
4. Code Reps & Warranties
5. Carve-Out: carve-out such code from any warranties and indemnities which would apply to other proprietary code



# Open Source Licenses: Examples

Copyright © John Doe 2007 All rights reserved

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer, without modification.
2. Redistributions in binary form must reproduce at minimum a disclaimer similar to the "NO WARRANTY" disclaimer below ("Disclaimer") and any redistribution must be conditioned upon including a substantially similar Disclaimer requirement for further binary redistribution.
3. Neither the names of the above-listed copyright holders nor the names of any contributors may be used to endorse or promote products derived from this software without specific prior written permission.



**Alternatively**, this software may be distributed under the terms of the GNU General Public License ("GPL") version 2 as published by the Free Software Foundation



# Open Source Licenses: Examples

Linksys Example:



2003, Cisco acquired Linksys for US\$500 million.

Post-closing: Linksys software had used a kernel of code which was subject to the GPL.

Cisco ultimately had to disclose “proprietary” code that was derived from or linked to this kernel.

Linksys has been buying the culprit chipsets from Broadcom, and Broadcom in turn outsourced the coding to an overseas developer.

# Open Source Licenses: Examples

## BusyBox Example: Current US Litigation

*Andersen and Landley v. Monsoon Multimedia Inc.*, (No. 07-CV-8205) settled; Monsoon appointed an “Open Source Compliance Officer” to monitor its use of open source software.

Nov. / Dec. 2007: Three new lawsuits, this time against:

- *Xterasys Corporation,*
- *High-Gain Antennas, LLC,* and
- *Verizon Communications,*

also for violation of the terms of GPL in connection with the use of BusyBox open source code.



# Biotechnology / Life Sciences (BiOS): What is Open Source?

## Biological Open Source (BiOS):

- development of new license models and ways of collaborating, similar to OSS concept but tailored for biological innovation
- legally enforceable agreements that enable sharing of patented and non-patented technology (may include materials and methods); creates a network of users who agree to certain license terms with the freedom to cooperate
- “protected commons”



# Biotechnology / Life Sciences (BiOS):

- Examples: BiOS License, CAMBIA
- <http://www.bios.net/daisy/bios/licenses/2997.html>
- 



Biological Innovation

The BiOS logo consists of the word "BiOS" in a large, blue, bold, sans-serif font.

open SOURCE open SCIENCE  
open SOCIETY



# Biotechnology / Life Sciences (BiOS): License Terms

## Section 1: Licensee agrees:

a. not to assert any intellectual property rights, including patents, pending patent claims, or bailments, to this IP and Technology and any derivatives, in any way, against any others that have agreed to these conditions; and

b. not to accept any license or third party grant of rights conflicting with (a).

**Non-Assertion against co-licensees**

**“Supremacy clause”**



# Biotechnology / Life Sciences (BiOS): License Terms

**Section 3:** Obligations to third parties, for example under a Materials Transfer Agreement or Sponsored Research Agreement, that pre-date your receipt of any IP and Technology from Steward will be honoured except where they are in conflict with your obligations to the terms in this Agreement. You agree to make best efforts to obtain a waiver of any such conflicting obligations from such a third party.

Prior Agreements  
must be in  
compliance with  
BiOS



# Biotechnology / Life Sciences (BiOS): License Terms

**Section 5:** You may use the IP and Technology to carry out research and to create and sell Products. You may also use and distribute any derivatives you make using the IP and Technology that constitute enabling technology, but only if you make them available to others under the terms of this Agreement and at a price not to exceed reasonable cost of production.

Use for research or  
commercialization

Grant-back required if  
Licensee uses and  
distributes  
derivatives made  
using the licensed  
Technology



# Biotechnology / Life Sciences: Examples

*TransBacter*:

using Agt for gene transfer to plants is covered by other patents preventing its use; new *TransBacter* technology provides alternative, made available through an ‘open-source’ license that has no commercial restrictions, but requires a commitment to sharing improvements.

CAMBIA has applied for a patent on this technology and offers *TransBacter*, the collective name it has given these bacteria, as an ‘open-source’ alternative.



# Biotechnology / Life Sciences: Examples

## Patent Pool: West Coast Licensing Partnership

Consists of nine North American Pacific Rim research institutions.

The WCLP recognized certain technologies developed within each institution might be of limited value for licensees on their own. As a result, the partnering institutions have begun working together to present "bundles" of compatible life science technologies that together provide a value-added package.

Each bundle agreement grants non-exclusive rights to a large group of technologies and tools under a single license.

Example: Mouse Models for the Study of Neurodegenerative Diseases



# Biotechnology / Life Sciences: Tips

## Five Quick Tips:

1. Educate Researchers: Be aware of “BiOS Creep”: materials shared informally between labs may infect multiple projects
2. Determine Which License Applies
3. In academic setting, trade-secret protection not often a viable option.
4. Good Candidates for OSL? Distribution of research tools, genomics and proteomics data?
5. Open Source is one of the tools in the toolbox: patent pools, cross-licensing, exclusive/non-exclusive licenses, etc.



# Resources: ipblog.ca

## Software

Free Software Foundation: <http://www.fsf.org>

Open Source Initiative: <http://www.opensource.org/>

## Biotech / Life Sciences

BiOS Initiative: <http://www.bios.net/>

Public Intellectual Property Resource for Agriculture: <http://www.pipra.org/>

Tropical Disease Initiative: <http://www.tropicaldisease.org/>

Article: Are university researchers at risk for patent infringement?

[http://www.cambia.org/daisy/cambia/3882/version/default/part/AttachmentData/data/Are university researchers at risk for patent infringement?.pdf](http://www.cambia.org/daisy/cambia/3882/version/default/part/AttachmentData/data/Are%20university%20researchers%20at%20risk%20for%20patent%20infringement?.pdf)

WCLP: <http://www.westcoastlicensing.com/index.htm>

AFMnet: <http://www.afmnet.ca>



# Questions

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