Open Source Software
Free as in Freedom
Not Free as in Free Beer

Michele Herman
Ph. (425) 247-2446
mherman@intven.com
John Lyon
john.lyon@thomashorstemeyer.com
Ph. (770) 933-9500

Overview

- Open Source Software (OSS) Landscape
- OSS Licenses
- Legal Risks
- Litigation involving OSS
- Good Practices
- Q&A

The Open Source Landscape

- Primary definition of Open Source Software is software that is licensed under a license that conforms to the Open Source Definition (OSD)
- Community Development Projects
  - May be used to produce OSS but not always
- Business Models
  - Save in development costs particularly for operations and web-based services
  - Promote commercial sales of other software, hardware and/or support services

OSS Licenses

- Important requirements of the OSD
  - Must be royalty free
  - Must permit modifications to source code and redistribution
  - Must not require license execution
- Just because you do not need to sign a license does not mean that there are not significant terms and conditions. Nor does it mean that the IP is in the “public domain.”

Permissive and Reciprocal Licenses

- Permissive Licenses (BSD, MIT, Apache)
  - Reproduce notices and license
  - No requirement to make source code available
- Reciprocal or Copyleft
  - Reproduce notices and license
  - Requirement to make source code available
  - Strong Copyleft licenses – GPL and LGPL
    - License terms may attach to combined code and programs, e.g., via linking.
  - Weaker Copyleft licenses – MPL, EPL, and CPL
    - Usually limited to modifications to the copyleft code or files containing the copyleft code

Important License Terms: GPL v.2

- "Liberty or Death" Clause
  - If one cannot distribute applicable software under the terms of GPL v. 2, then cannot distribute at all.
  - Example: Binary only distribution
- "Copyleft" Provisions
  - Modifications to the Source Code Must Be Licensed Under GPL v. 2
  - Derivative Works Must Be Licensed Under GPL v. 2
    - What qualifies as a "Derivative Work?"
      - Statically linked code?
      - Dynamically linked code?
        - FSF says yes
        - LGPL is redundant if dynamically linked code is not a derivative work

Important License Terms: GPL v.3

- "TiVo Clause"
  - Vendors must provide cryptographic keys necessary to modify software and enable execution of modified binaries.
  - Intended to prevent code-signing techniques from being used to circumvent GPL terms
- Disclaimer of DMCA Anticircumvention Protections
- Patent License Terms
  - Non-discriminatory conveyance of necessary licenses
  - Prohibitions on licensees filing suit for patent infringement related to covered code

Important License Terms: MPL v. 2

- Expressly Permits Dual Licensing with GPL
  - GPL
  - LGPL
  - AGPL
- Patent Provisions
  - License terminates if licensee initiates a patent infringement suit alleging that the licensed software infringes a patent

Important License Terms: Apache v. 2

- Patent License Terms
  - Licensor of code must provide “perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable…patent license” to licensee
  - Automatic revocation of all patent licenses granted to the licensee should the licensee alleged that the licensed software constitutes patent infringement

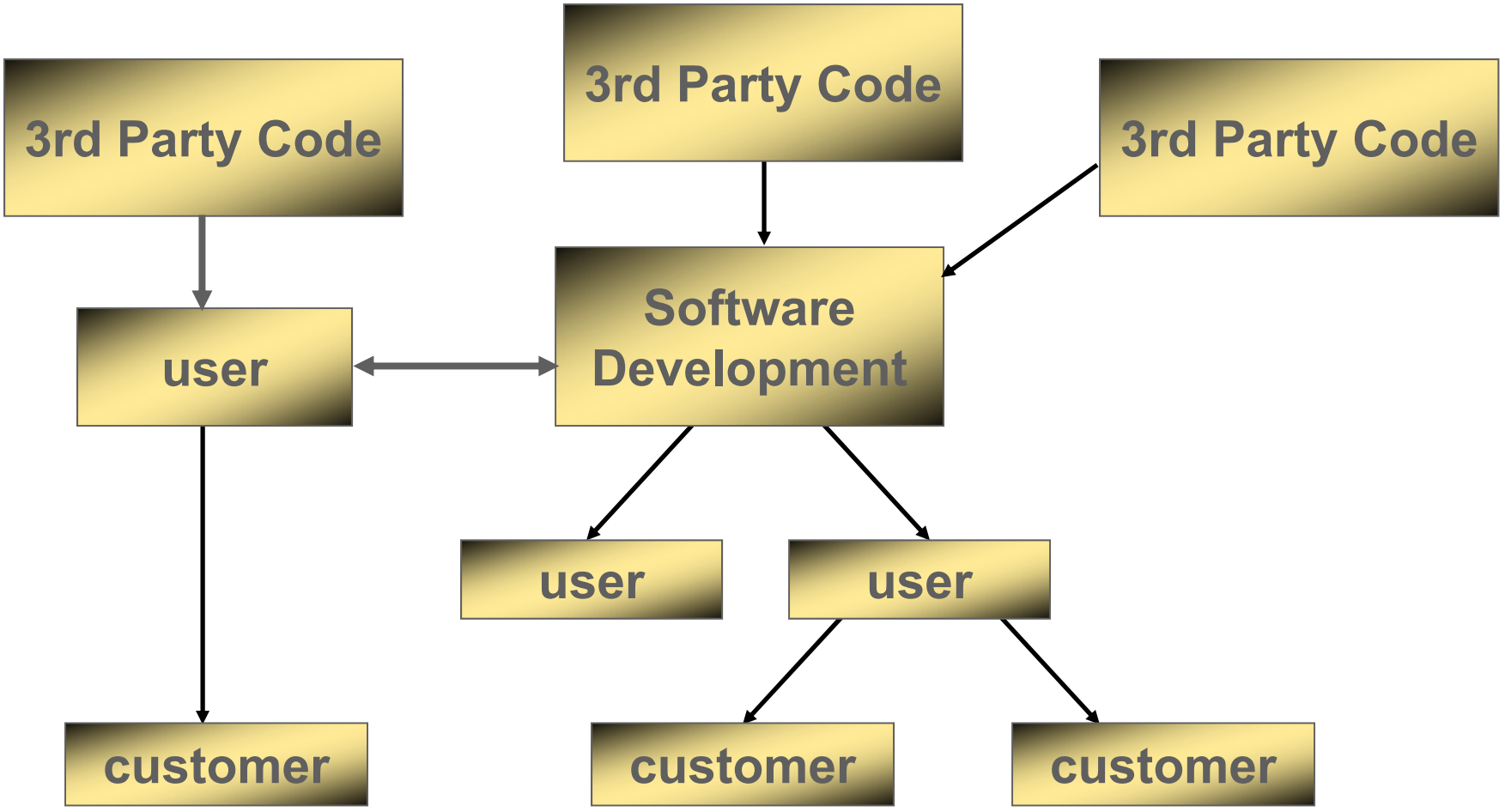
Important License Terms: BSD/MIT

- No license restrictions for modified or derivative works
  - Can distribute binary only versions
- Some versions require reproduction of list of contributors to original software
  - List can get quite long over time
  - Can be cumbersome to comply with

Other Licenses

- Vanity Licenses
  - Dangerous
  - Often redundant in view of more commonly used licenses
  - Often contain ambiguous terms
- Unlicensed Code
  - Unlicensed code is not necessarily in the public domain
  - Unlicensed code will probably be governed by default provisions of applicable copyright law

Understanding the Legal Issues
Flow of IP Rights in OSS



When Legal Issues Arise

- Developing and/or releasing products containing OSS
- Running a web-based service using OSS
- Purchasing OSS for business operations
- Embedding/bundling third party supplied software into your products
- Acquiring ownership of another's software

Key Risks To Avoid

- Loss of trade secrets
- Noncompliance with OSS Licenses
  - Copyright infringement – Injunction, statutory damages
  - Breach of agreement – Damages, specific performance
  - Community outrage
- OSS Integrity/Pedigree
  - Damages
  - Injunction
- Unauthorized contributions to community
- Express and implied patent licenses

Enforcement Objectives

- Follow rules
- Raise “social” awareness
- Ensure intended value is recognized
  - Attribution
  - Marketing
  - Sales of other products/services
  - Improve software
- Discouraging use is NOT an objective

Compliance and Enforcement

Jacobsen v. Katzer (Fed. Cir. 2008)

- Jacobsen manages OSS group called Java Model RR Interface (JMRI).
- JMRI, with many participants, created DecoderPro.
- Jacobsen holds copyright in the code, which he makes available for download from a website under the Artistic License.
- Katzer develops commercial s/w for model train enthusiasts.
- Katzer failed to comply with the notice provisions of the Artistic License
- Court held that Katzer was a copyright infringer
- Court concluded that even though Katzer agreed to comply going forward the D. Ct. could still impose an injunction on the basis that Katzer might fail to comply again
- Settlement Feb. 18, 2010
  - Permanent injunction: no download, modification or distribution
  - $100,000 payment; each pays own attorney fees

Compliance and Enforcement

BusyBox Cases

- BusyBox – Set of Unix utilities used in limited resource devices such as cell phones and PDAs
- Licensed under the GPLv2
- Widely used in products sold by more than 100 manufacturers
- Many manufacturers apparently did not know that they were distributing BusyBox under the GPL
- Spawned at least several lawsuits most of which have settled

Compliance and Enforcement

BusyBox Allegations

- Complaints have not alleged exotic copyright infringement, such as whether the software is a derivative
- Complaints have alleged
  - Lack of inclusion of source code or an offer for source code
  - Lack of copyright notice
  - Lack of inclusion of a copy of the GPL itself

Enforcement and Compliance

BusyBox Settlement Terms

- Retain Open Source Compliance Officer
- Disclose source code for the version of BusyBox distributed
- Take substantial efforts to inform previous recipients of their rights under the GPL
- Pay an undisclosed amount to the owners of BusyBox

Compliance and Enforcement
Cisco/Linksys Round 1

- Cisco Purchases Linksys (2004)
- FSF Discovers Linksys Routers Using GPL Code
- Cisco Releases Source Code for Firmware for WRT54G Wireless Router
- Spawns Several Open Firmware Projects
  - OpenWRT, DD-WRT, etc.
  - Linksys Competitors Rebadge Firmware for Own Products
- Cisco licenses vxWorks as replacement

Compliance and Enforcement
Cisco/Linksys Round 2

- FSF filed suit against Cisco in Dec 2008 alleging CR infringement by Linksys products of GCC, binutils, and the GNU C Library, licensed under GPL and LGPL
- Settled May 2009; Cisco agreed to:
  - Appoint Free Software Director for Linksys, who will periodically report to FSF
  - Notification on Linksys website and in publications
  - Provide source code on website to FSF programs
  - Monetary contribution to FSF

Compliance and Enforcement
Helwig v. VMWare

- Suit filed in Germany March, 2015
- Alleges that VMWare incorporated Linux kernel code into VMWare hypervisor in violation of GPL v. 2.
  - At issue is whether dynamic linking of GPL code with proprietary code creates a derivative work
- This is “bet the farm” litigation

And It's Not Just Compliance

Issues surrounding Android

- Apple v. HTC
  - June 2010: Apple filed complaint against HTC alleging patent infringement by smartphones incorporating Android.
- NTP v. Google, Motorola
  - July 2010: NTP filed complaint against Google and Motorola stating email system and applications adapted for use in conjunction with Android infringe patents
- Oracle America v. Google
  - August 2010: Oracle America filed complaint against Google stating Android s/w stack consists of Java applications that infringe patents and copyrights owned by Oracle
- Microsoft v. Motorola
  - October 2010: Microsoft files ITC and district court actions against Motorola for infringement of 9 Microsoft patents by Motorola's Android-based smartphone
- Gemalto SA v. Google, Motorola, HTC, and Samsung
  - October 2010: Gemalto files complaint alleging that smartphones that use Android infringe patents covering Java Card technology

Good Practices

Avoid Painful Enforcement Situations and Other Pitfalls

- Look at the code to make sure you know which license applies if you download the code from a website
- Comply with all of the requirements of licenses that apply to the software you use, modify and/or distribute
- Institute an OSS Corporate Policy and Procedures
  - But failing that:
    - Identify an internal point of contact
    - Respond immediately to any notification
    - Be constructive
    - Take corrective action
    - Pay a fine

Good Practices

Avoid Painful Enforcement Situations and Other Pitfalls

- Make sure you can easily modify products, even those already in the field, that incorporate OSS in case the OSS turns out to infringe third party IPRs
  - More important for community-developed OSS that does not have more formalized contribution processes
  - Higher priority for core products

OSS Q&A

Q: What makes OSS different than proprietary software?

A: It is distributed under an OSS license.

Q: Is OSS in the public domain?

A: No. There are license terms that you must comply with.

Q: If I use OSS will I avoid infringing others' IPRs?

A: Not necessarily. In fact there may be an increased risk of infringing others' IPRs because sometimes OSS is developed in a community project that may not use appropriate legal safeguards in accepting code contributions

Thank You!

Issues in Open Source Procurement & Distribution

Michael Atlass
Ph. (858) 334-8463
matlass@qti.qualcomm.com
Cindy Huang
Ph. (631) 501-5712
chuang@cdfslaw.com

Open Source Issue Review

- License restrictions on distribution create copyright infringement risk if not in compliance.
- Areas of potential non-compliance
- IP risk
- Attractive license for distribution to encourage community development
- Even assuming risks are managed, what's the cost?
  - http://www.zdnet.com/article/after-a-10-year-linux-migration-munich-considers-switching-back-to-windows-and-office/

License restrictions on distribution create copyright infringement risk if not in compliance

- If the restriction is a condition and the condition is not met (non-compliance), there is no license – thus copyright infringement lies
  - Jacobsen v. Katzer 535 F.3d 1373 (Fed. Cir. 2008)
- The restriction must (really) be a condition to have this effect.
  - MDY Indus., LLC v. Blizzard Entertainment, Inc., 629 F.3d 928 (9th Cir. 2010)
- Problem: you may not know what's in your code
  - How then do you comply?
  - Scanning? OpenChain for your suppliers? SPDX?

Areas of potential non-compliance

- Attribution failure
- Inadvertent inclusion
  - Contractor or employee inclusion of restrictive licensed code
- Platform restrictions (ex: MSLPL, drivers from hardware makers)
- Licensed code incompatibly linked (Apache2/GPL2, CDDL/GPLv2, module license issues)
- Failure to deliver (complete) source code
- Failure to deliver license

IP Risks

- Using Copyleft code puts Contractor rights in IP at risk under the FAR 52.227-13/14 if it's incorporated into their work
  - "greater rights" under the FAR's putting Patent IP at risk for contractors
  - Limited Rights or Restricted rights in the source code itself can be put at risk for contractors
- Copyleft licensing limits Agency ability to manage IP rights in their projects
- Can't take back a contribution once it's public
  - Samsung accidental release under GPL
  - http://techrights.org/2013/08/17/exfat-and-gpl/
- Can't control where it goes – recipients are free

What makes a license attractive to development?

Think of your mission first. Then pick a license that supports it.

- Can use license to “force” contributions from community
  - Can be supplemented with Contribution License Agreement
  - Consider this for projects that you want to be perpetual and don’t want to have any control over
- Or can be used to encourage development effort and re-use at limited cost
  - Use permissive licenses without patent license obligations to attract commercial input and ease of reuse

Procurement

- USG wants to obtain a product or service
  - Request for Proposal
    - Vendors submit RFPs
    - Select vendor, negotiate contract
- FAR 52-227-13/14 rights in patents and data.
  http://farsite.hill.af.mil/vffara.htm http://farsite.hill.af.mil/vfdfara.htm

  Consider whether conflicts with OS terms.
  - GSA schedule – buy direct
- Project begins
- Project milestones met
- Project delivery
- Ongoing servicing

Approach Each Scenario with Agency Mission in Mind

- What license is the OS covered under?
- What are the obligations under the license
  - For modifications
  - For distribution
  - For contribution of source
- What type of entity is the vendor?
  - Company who cares about patents
  - Entity that is anti-patent

Requirements to consider in using licenses	Server Deployment on Gov't Github	Architecture calls for dynamic linkage	Architecture calls for static linkage	Distribute under proprietary license terms by others	Government distributing patched code of others.	Open Source Contributions
CC0 (PD dedication)						
BSD-type				Attribution requirement	Attribution requirement	Attribution may be in code file
Clear BSD	Recipients don't get patent licenses	Recipients don't get patent licenses for that code covered by this license.	Recipients don't get patent licenses for that code covered by this license.	can provide own license terms if ClearBSD components are included but need to provide notice	Recipients don't get patent licenses	Recipients don't get patent licenses
AGPL	must distribute changes in source to users on request	controls rights to linked code	controls rights to linked code	Not available option	must distribute changes in source to users on request	must distribute changes in source to users on request
GPLv2	obligations active on transfer of code	controls rights to linked code	controls rights to linked code	Not available option	Under GPL	Under GPL
GPLv3	obligations active on transfer of code	controls rights to linked code	controls rights to linked code	Not available option	Under GPL	Under GPL
LGPLv2.1	obligations active on transfer of code	using standard header only and not modified, does not require affect your code	affects or controls rights in linked-to code	Not the LGPL program files, but headers (.h files) may be OK. Requires close analysis.	In binary, only the LGPL header file may be included unless it's an LGPL licensed distribution	Under LGPL
LGPLv3	obligations active on transfer of code	using standard header only and not modified, does not require affect your code	affects or controls rights in linked-to code	Not the LGPL, but headers (.h files) may be OK. Requires close analysis.	In binary, only the LGPL header file may be included unless it's an LGPL licensed distribution	Under LGPL
Apache 2.0		No prohibition but see Section 1 Derivative Works	OK to use under own license, so long as original code is identifiable (see section 1 Derivative Works), but see section 4	OK, but Follow section 4 of license	If under Apache, taking on obligations of Apache.	If under Apache, taking on obligations of Apache.

Distribution Use Cases – which one best fulfills Agency Mission?

- Creation of a project by Government
- Creation of a project by contractor for Government
- Transfer of rights (or whole project) to private entity from Government
- Using existing OS Projects by Government or its contractors
- Government support of “upstream” projects

Compliance Tools

- DCO/SoBy (Linux Foundation reps by submitters)http://elinux.org/Developer_Certificate_Of_Origin
- OpenChain: https://wiki.linuxfoundation.org/openchain/start (presso link: http://events.linuxfoundation.org/sites/events/files/slides/IbrahimHaddad-Collab%20Summit2015-FINAL.pdf)
- SPDX (Software Packet Data eXchange) https://spdx.org
  - Tools: https://spdx.org/tools
- Scanning (see tools link above)
- Education (Engineers, Users, OS Project contributors, Community).

Signed-off-by: John Doe <john.doe@hisdomain.com>

Developer's Certificate of Origin 1.1

By making a contribution to this project, I certify that:

(a) The contribution was created in whole or in part by me and I have the right to submit it under the open source license indicated in the file; or

(b) The contribution is based upon previous work that, to the best of my knowledge, is covered under an appropriate open source license and I have the right under that license to submit that work with modifications, whether created in whole or in part by me, under the same open source license (unless I am permitted to submit under a different license), as indicated in the file; or

(c) The contribution was provided directly to me by some other person who certified (a), (b) or (c) and I have not modified it.

(d) I understand and agree that this project and the contribution are public and that a record of the contribution (including all personal information I submit with it, including my sign-off) is maintained indefinitely and may be redistributed consistent with this project or the open source license(s) involved.

What Gov't has already

- Special terms for GitHub
  - https://help.github.com/articles/amendment-to-github-terms-of-service-applicable-to-u-s-federal-government-users/
- Their own public facing repository https://www.govcode.org/repos
- Their own CLA Example from NASA
  - https://github.com/visionworkbench/visionworkbench
- TOU?
  - Ex: Stackoverflow - http://stackexchange.com/legal
- Security?
  - http://www.underhanded-c.org
  - https://en.wikipedia.org/wiki/Heartbleed
  - But see https://www.fsf.org/blogs/licensing/epa-opposed-dmca-exemptions-that-could-have-revealed-volkswagen-fraud
- Privacy?

Thank You!