OPEN SOURCE and SUSTAINABILITY

The Open Source Licensing Framework

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OSS Watch

Overview

1) Five Common OSS Licences

2) Possible Sustainability Issues

3) The GPL v3 Example

OSS Licences – What Is Copyright?

"Copyright gives the creators of certain kinds of material rights to control ways their material can be used... The rights cover: copying; adapting; distributing; communicating to the public by electronic transmission (including by broadcasting and in an on demand service); renting or lending copies to the public; and, performing in public"

(http://www.patent.gov.uk/copy/indetail/basicfacts.htm)

OSS Licences – What Is A Licence?

"The means by which the owner of copyright gives permission to another person to carry out an action, which without permission, would infringe the copyright."

(http://www.patent.gov.uk/copy/glossary/index.htm)

Licensor licenses their work to the licensee.

OSS Licences – Top Five Licences

- **GNU General Public License v2**

- **GNU Lesser General Public License v2.1**

- **Modified BSD (Berkeley Software Distribution) License**

- **Apache License v2**

- **Mozilla Public License v1.1**

OSS Licences – Top Five Licences

Features common to all five:

They

• allow anyone to distribute the software for a fee (or give it away) without royalty to the licensor

• allow modified versions of the software to be distributed by licensees (**under varying terms**)

• exclude liability for damages to the extent possible under local laws

OSS Licences – Top Five Licences

GNU General Public License v2

• **Significant Features**

• All modified versions of GPL-licensed software must also be distributed under the GPL (if they are distributed at all) (section 2)

• All modified versions must advertise prominently what has been modified, who modified it, and when it was modified.

• Source code must be provided with all GPL-licensed software, either directly or via a request to the licensor (section 3)

OSS Licences – Top Five Licences

GNU General Public License v2

Significant Features

• All licensees of the software gain their licence directly from the original licensor (section 6). This preserves the licensors standing to take action against all licensees.

• No redistributing licensee may impose further restrictions on recipients (section 6)

• Additional restrictions placed on a licensee by a court mean that the licensee cannot distribute the software at all (section 7).

OSS Licences – Top Five Licences

GNU General Public License v2

Notes

• Section 2 embodies the 'infective' or 'viral' aspect of the GPL. Where GPL'd code is used to produce a 'derivative work' (US term) the resulting work **must** also be licensed under the GPL, or risk violating the original licensor's copyright.

• The intention of this section is to prevent code that has been released to the community under an open source licence being 'closed' again by licensee who wishes to redistribute a work based on GPL'd code without also providing the source code to those who receive it. This usually happens when someone wants to make a closed-source commercial product using GPL'd code.

OSS Licences – Top Five Licences

GNU General Public License v2

Notes

• Section 5 of the GPL explains how the licence operates without the explicit agreement of the licensee:

"5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it."

• This principle underpins all open source 'general licensing'.

OSS Licences – Top Five Licences

GNU General Public License v2

Notes

• The Free Software Foundation promotes the GPL and are the first point of contact for those who wish to report violations of it. The FSF retains lawyers to contact violators and ask them to either comply with the terms of the licence or remove all GPL code from their work. All violators contacted by the FSF so far have agreed to do one or the other.

• In Germany last year the Munich court upheld the GPL (s 2,3,4) when a co-copyright owner took action against a licensee who was not distributing the source code of their modified version. The court did not rule on the exclusion of warranties, which would seem to be incompatible with German consumer law.

(http://www.twobirds.com/english/publications/articles/Effectiveness_of_GNU_General_Public_Licence.cfm)

OSS Licences – Top Five Licences

GNU General Public License v2

Notes

• The widespread use of the GPL (it is the most popular OS licence) means that there is a large community of individuals and organisations prepared to help defend against attacks upon the licence's validity (eg IBM).

• The GPL allows for one modification of its terms: it allows a separate agreement to be attached that defines a provision of warranties from the licensor to the licensee. This provides a potential business model for individuals or organisations who wish to take on support of GPL-derived software as a service for sale.

OSS Licences – Top Five Licences

GNU Lesser General Public License v2.1

Significant Features

Terms are substantially identical to the GPL with the following exceptions:

• A work that is designed to be compiled or linked with the LGPL'd code is, in isolation, not a derivative work of the LGPL'd code and can thus be licensed in any way the author chooses (section 5).

• When distributing such code (perhaps in binary only form), the author can either not include the LGPL'd code at all, or include the LGPL'd code with its source and with copyright statements intact. The author must also make available tools and information that will allow the licensee to debug the interaction between the LGPL'd code and the author's code (section 6).

OSS Licences – Top Five Licences

GNU Lesser General Public License v2.1

Significant Features

• Licensees may relicense LGPL'd code under the full GPL if they wish. They do this by changing the accompanying notices that refer to the LGPL so that they refer to the GPL, and including a copy of the GPL itself.

OSS Licences – Top Five Licences

GNU Lesser General Public License v2.1

Notes

• (Slightly) less restrictive version of the GPL

• Originally intended to deal with the case of open source libraries.

"A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables."

• The LGPL can be used for any code, not just libraries, however:

• Derivative works of LGPL'd code must be libraries if they are themselves to be licensed under the LGPL. Other derivative works must be converted to the GPL, as detailed in section 3.

OSS Licences – Top Five Licences

Modified BSD (Berkeley Software Distribution) License

Significant Features

• Short

• Unmodified versions of the software must retain the copyright statement, the licence conditions and the disclaimer of warranties.

• Prior permission must be obtained from the licensor before their name can be attached to any modified version.

OSS Licences – Top Five Licences

Modified BSD (Berkeley Software Distribution) License

Notes

• The BSD licence does not prevent the code it licenses being absorbed into a closed source derivative.

• It is most appropriate for software which the author wishes to be as widely used as possible, regardless of whether it remains open source – for example code that implements a standard.

• The Modified BSD License is compatible with the GPL – code licensed under it can be combined with GPL'd code and the whole released under the GPL with no problems.

OSS Licences – Top Five Licences

Apache License v2

Significant Features

• Unlike the GPL, linking your code to the interfaces of Apache v2 licensed software does not render the linked whole a derivative work (section 1).

• The licence grants patent rights as well as rights under copyright inasfar as those patent rights are necessary to operate the software (section 3).

• Anyone who starts patent litigation against a licensor automatically loses their licensee status (section 3).

OSS Licences – Top Five Licences

Apache License v2

Significant Features

• Derivative works may be relicensed provided that the new licence's terms accord with those of the Apache v2 licence (section 4).

• Permission to use the licensor's trademarks, trade names, service marks or product names is not granted under the licence (section 6).

OSS Licences – Top Five Licences

Apache License v2

Notes

• Section 3 (withdrawal of licence to individuals pursuing patent claims against the licensee) makes this licence incompatible with the GPL (it is an additional restriction).

• This licence does not prevent the 'closed-sourcing' of code licensed under it.

OSS Licences – Top Five Licences

Mozilla Public License v1.1

Significant Features

• Modification may be distributed as differential comparisons against the licensed code (patches) (section 1.11)

• Source code must be made available with any distribution of the software or modified versions of the software (section 3.2).

• Executable versions of the code may be distributed under a separate licence provided that the distributor himself is in compliance with the MPL and the source to the executable continues to be available under the terms of the MPL (section 3.6).

OSS Licences – Top Five Licences

Mozilla Public License v1.1

Significant Features

• Licensees may create a 'Larger Work' – that is a combination of the MPL-licensed code and other code – and distribute the whole. In these circumstances the MPL-licensed code must continue to be distributed under the terms of the MPL, but the other code may be licensed as the author wishes (section 3.7).

OSS Licences – Top Five Licences

Mozilla Public License v1.1

Notes

• Resembles a commercial licence more closely than other open source licences, due to its origin in a large corporation.

• The MPL represents a half-way house between the permissiveness of the BSD licence and the strictness of the GPL. Section 3.7 opens the possibility of a licensee taking the code, including the contributions of many other programmers, and adding functionality to this codebase in a fashion that qualifies as 'other code' (meaning code under another licence). In this case, the licensee can sell licences to their own 'other code' without providing the source, and distribute it as a bundle with the MPL-licensed material.

OSS Licences – Top Five Licences

Mozilla Public License v1.1

Notes

"1.9. "Modifications" means any addition to or deletion from the

substance or structure of either the Original Code or any previous Modifications. When Covered Code is released as a series of files, a Modification is:

   A. Any addition to or deletion from the contents of a file containing Original Code or previous Modifications.

   B. Any new file that contains any part of the Original Code or previous Modifications."

OSS Licences – Sustainability Issues

1) The focus of a project may move away from your original intention

2) A licence may be ruled to be ineffective, or partially ineffective either in your home territory or abroad

3) Your licence terms may become unsustainable over time (cf BSD)

4) Your licence terms may lose their relevance over time

OSS Licensing

GNU General Public License v2

What's the problem? (1)

• drafted using technical language specific to US law (exclusion of warranties etc)

• hybrid licence / manifesto

• manifesto's ethical opposition to digital rights management not given legal effect in licence code

• 'unintentional' incompatibility with other open source licences

OSS Licensing

GNU General Public License v2

What's the problem? (2)

• integration with non-free code over web service architectures allows developers and their employers to benefit from the work of the the free software community without contributing back to it

• unwitting violators of the GPL – for example software aggregators – are hit instantaneously by penalties for violation

OSS Licensing

GNU General Public License v2

What's the problem? (3)

• there is no explicit grant of the patent rights that are required to operate the software, and no requirement that a register of associated rights be attached to GPL'd code

• following on, a malicious person could create a GPL-trap by releasing code whose use would violate a third party's patent rights

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (1)

• *drafted using technical language specific to US law (exclusion of warranties etc)*

• GPL 3 rephrases many clauses, avoiding phraseology that is linked to any particular national legal system. In this way the FSF hope that courts will be forced to engage with the content of the licence in order to construe it, rather than falling back on what certain phrases traditionally mean.

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (2)

- *hybrid licence / manifesto*

- No change here...

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (3)

• *manifesto's ethical opposition to digital rights management not given legal effect in licence code*

• New section forbids use of the GPL 3 on software which "illegally invade users' privacy" (redundant?)

• New section also forbids "modes of distribution that deny users that run covered works the full exercise of the legal rights granted by this License"

• New section declares that "no covered work constitutes part of an effective technological protection measure" (DMCA / EUCD)

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (4)

• *manifesto's ethical opposition to digital rights management not given legal effect in licence code (continued)*

• "Complete Corresponding Source Code also includes any encryption or authorization codes necessary to install and/or execute the source code of the work, perhaps modified by you, in the recommended or principal context of use, such that its functioning in all circumstances is identical to that of the work, except as altered by your modifications."

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (5)

• '*unintentional*' *incompatibility with other open source licences*

• GPL 3 explicitly permits licensors to add new permissions and certain kinds of restriction to their copy of the licence. These latter include: different exclusions of warranty (internationalisation), certain kinds of patent litigation counter measures (apache v2 incompatibility thus fixed), preservation of source-spewing functionality...

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (6)

• '*integration with non-free code over web service architectures allows developers and their employers to benefit from the work of the the free software community without contributing back to it*

• GPL 3 permits the licensor to add a restriction that prevents modifiers of their code removing functionality that "allow(s) users to immediately obtain copies of (the program's) Complete Corresponding Source Code"

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (7)

• *unwitting violators of the GPL – for example software aggregators – are hit instantaneously by penalties for violation*

• "any copyright holder may terminate your rights under this License at any time after having notified you of the violation by any reasonable means within 60 days"

• This represents an escape route from the 'head of the posse' role that FSF have played over the last two decades. By relaxing the immediate termination provision, they are forcing licensors to 'play nice' with violators, even without the FSF's calming influence.

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (8)

• *there is no explicit grant of the patent rights that are required to operate the software, and no requirement that a register of associated rights be attached to GPL'd code*

• GPL 3 now explicitly grants rights to use all patents held by any of the licensors if they are necessary to use the software

• no requirement to list associated patents, but the complete grant makes this less serious (compare Mozilla licence, where you may either grant a patent or give a clear warning that permission is needed)

OSS Licensing

GNU General Public License v3 Draft 1

What's the solution? (9)

• *following on, a malicious person could create a GPL-trap by releasing code whose use would violate a third party's patent rights*

• GPL 3 insists that licensors who have a patent licence that permits them to develop and use the software "shield downstream users against the possible patent infringement claims from which your license protects you."

OSS Licensing

GNU General Public License v3 Draft 1

- **"How Can I Get Involved?"**

- Go to http://gplv3.fsf.org/

- Create an account

- Add your comments and/or questions to the first draft

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GNU General Public License v3 Draft 1

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• **"How Can I Get Involved?"**

• Discussion Committees are formed, each with a common interest (big business, individual developers, big OSS projects etc)

• Discussion Committees read all the comments, aggregate them into issues.

• Summaries of these issues, along with summaries of the submitted arguments on both sides, get sent to FSF to inform the next draft.

OSS Licensing

GNU General Public License v3 Draft 1

•**Any problems so far?**

Linus Torvalds has objected strongly to the provision of GPL 3 which mandates the inclusion of all necessary signing keys to compile and run covered code.

Let's refresh our memories on what this bit of the licence draft actually says:

OSS Licensing

GNU General Public License v3 Draft 1

Any problems so far?

•"Complete Corresponding Source Code also includes any encryption or authorization codes necessary to install and/or execute the source code of the work, perhaps modified by you, in the recommended or principal context of use, such that its functioning in all circumstances is identical to that of the work, except as altered by your modifications. It also includes any decryption codes necessary to access or unseal the work's output. Notwithstanding this, a code need not be included in cases where use of the work normally implies the user already has it."

OSS Licensing

GNU General Public License v3 Draft 1

Any problems so far?

• Torvalds feels that it is not the place of software licences to combat DRM. He argues that the appropriate response to hardware-backed DRM is to not buy any equipment which implements it, and the appropriate response to content that is encumbered by DRM is to make better content and release it under (say) a Creative Commons licence.

• He interprets the previous clause as saying that – for example – Red Hat would have to give out the private keys they use for signing their update rpms. He sees this as impractical and unnecessary.

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GNU General Public License v3 Draft 1

Any problems so far?

"We want to discourage use of GPL to further DRM efforts," Freedom Software Law Centre counsel Richard Fontana said at the Open Source Business Conference (OSBC) in San Francisco on Tuesday. The Freedom Law Centre represents the FSF.

Torvalds last month ruled out putting the Linux kernel under GPL 3.0 because he believed it required contributors to make their private signing keys available. The draft GPL 3.0 states DRM is "fundamentally incompatible with the purpose of the license".

Fontana said: "Linus Torvalds has misread it... We require disclosure of the codes if it's necessary to make the software run."

http://www.theregister.co.uk/2006/02/15/gpl_drm_license/

Thanks !