Collaborative GPL Enforcement Through Non-Profit Entities

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Thursday 1 May 2014

This is a text version of the slides. The “full experience” web version is available online at: http://ebb.org/bkuhn/talks/ELC-2014/compliance.html.

The source code for these slides is available at: https://gitorious.org/bkuhn/talks/source/master:ELC-2014.

My History

• Worked my first GPL enforcement case in 1999 (as FSF volunteer).
• Started working for FSF in 2000 (was there until 2005).
• Now: President & Distinguished Technologist of Software Freedom Conservancy & on Board of Directors of the FSF.
• Both FSF and Conservancy have extensive GPL enforcement programs:
  – so, the plurality of my time since 1999 has been spent on GPL enforcement.

How GPL Works (Theoretically)

• Copyright: the internationalized standard for authors’ controls over works.
• Use copyright license to grant permission.
• Make permission conditional on giving your downstream the four freedoms.
• This is the copyright law hack of copyleft.
• Copyright rules require compliance with the license.
How GPL Works (In Reality)

- What do you do when someone violates?
  - (and social pressure for compliance fails)?

- Violation of the license means lost rights for distribution.
  - See GPLv2§4 & GPLv3§8
  - Further distribution thereafter (even in compliance) is copyright infringement.

- Copyright holders must use copyright enforcement:
  - ... but for a *good* cause: the four freedoms.

Complexity of Modern Enforcement

- Not all GPL enforcement is software-freedom-motivated.
- Oracle, after all, holds MySQL’s copyrights now & enforces.
  - I call this the corrupt version of what I do.

- Compliance must be paramount . . .
  - ... over all other interests.
  - Some call this “community enforcement”.
  - What’s that mean?

Who Reports Violations?

- Who reports violations to community enforcers?
  - Individual users.

- The user buys buy embedded products . . .
  - ... (such as a TV, DVD Player, wireless router, mobile phone) . . .
  - ... user tries to get the GPL’d sources and build them . . .
  - ... and it doesn’t work.

- Conservancy gets a new report like this weekly.
Community Enforcement

• All community enforcement follows this rote procedure:
  – Receive a violation report from an end-user.
  – Verify it’s really a violation.
  – Send a letter to the violator.
  – CCS-Ask: Ask the violator to submit CCS candidates
  – Review and provide feedback on CCS.
  – If we know why CCS doesn’t work, give patches to violator.
  – If CCS still has issues, goto CCS-Ask.
  – Ask violator to inform past customers.
  – Ask violator to cover reasonable hourly cost of this work.
  – Restore copyright permissions.

• Let’s talk about the money issue first.

Money

• No community enforcer is getting rich.
  – 501(c)(3) non-profit charity enforcement == accountability.
  – On a Form 990, you can look up: ...
  – … how much Conservancy spends on / receives from enforcement.
  – … my annual salary & compensation.
  – https://sfconservancy.org/about/filings/

• Anyway, who should pay for enforcement:
  – Those who comply or those who violate?
  – Individual donors to non-profits?

• There must be a deterrent.

• Confidentiality is something violators ask for.
What Conservancy Strives to Avoid

- Junking products:
  - That’s bad for the environment.
- Injunctions:
  - We’ve gotten them, but only after:
    * 1+ years of ongoing violation,
    * many warnings to the violator, &
    * explicitly warning the violator that’s our plan.
- Companies switching away from GPL’d software.
  - We all want them to use: just in compliance
- Lawsuits of any kind:
  - suing someone is always a last resort . . .
  - . . . usually after years & hundreds of hours of begging them to comply.

What’s CCS?

- The point of GPL is not merely to examine the source.
- GPLv2 requires what it calls “complete, corresponding source”: CCS
- The freedom to modify requires, as GPLv2 says:
  - “the scripts used to control compilation and installation of the executable”
- CCS check: verify these scripts actually do compile and install the executable.
- For embedded systems, this is not always easy.
- But, why is it important?
Coalition of the Willing

- Spring 2003: dozens of reports on WRT54G.
- Discussions begin with Cisco (who’d bought Linksys just weeks before)
- Story hits slashdot on 2003-06-08.
- FSF puts together group to do enforcement.
  - key members: Erik Andersen (BusyBox) & Harald Welte (Linux)

WRT54G Begat OpenWRT

- After years of complex negotiation, and many CCS “rounds”:
  - All CCS works (only two proprietary Linux modules held back).
  - First check-in of OpenWRT is that CCS release.
- OpenWRT project leaders to this day credit this as their start.
  - Source: Gregers Petersen on FLOSS Weekly Episode 265
- OpenWRT blossomed into the key replacement firmware for most wireless routers.

GPL-violations.org

- FSF was initially shy about lawsuits.
- Harald participated with FSF in WRT54G matter.
  - But Harald disagreed with FSF’s early 2000s “no litigation” strategy.
  - (in hindsight, Harald was right).
- Launches multiple lawsuits in Germany (about 8 between 2005-2008).
- Quite successful, but gpl-violations.org is now mostly defunct.
  - except for running the mailing lists.
Embedded Violations Prevalent

- Erik Andersen becomes exasperated by mid-2006.
  - post-WRT54G: router & NAS market is a violation haven.
- Erik asks for help.
- Conservancy becomes his enforcement agent (& receives some others’ assignment)
- Conservancy has had > 100 GPL violations queued for action since 2007.
  - Conservancy’s list is now > 300
- Conservancy’s work in BusyBox enforcement has made a real difference.
  - both to BusyBox and Linux compliance.

Samsung: A Success Story

- Samsung has violated the GPL before.
  - Conservancy even had to sue them over TV products.
- Conservancy settled & the final CCS was really good!
  - That CCS launched SamyGo project
- More recently, Conservancy helped Samsung fix their exFAT module violation.

Why Do Violations Happen?

- As Samsung now knows:
  - Compliance actually isn’t difficult.
    - & compliance problems are easily remedied.
- So, why are there so many violations?
The Upstream Problem

When I said that I was king of forwards, you got to understand that I don’t come up with this stuff. I just forward it along. You wouldn’t arrest a guy who was just passing drugs from one guy to another.
— Michael Scott, The Office (USA Version)

Suppliers Bully OEMs, AFAICT

- I’d be the worst police officer in the world.
- No one ever turns “states’ evidence”
  - … at least they don’t for me, anyway.
- Me: “Please, just tell me on the record your supplier violated when distributing to you.”
- Them: “We’ll work with our upstream to get into compliance.”

What Can You Do About This?

What Can You Do About This? (0)

- Make sure the suppliers’ base system builds/installs from sources.
  - Consider using Yocto (automated tools to help w/ compliance)
  - It’s better engineering to have reproducible builds anyway.
  - Convince your bosses the build/install process isn’t their value add.

What Can You Do About This? (1)

- Just put that CCS online & put URL in the manual.
  - No, GPLv2 doesn’t require this!
  - But, I don’t want to test your offers for source.
  - Your fulfillment department will screw this up.
What Can You Do About This? (2)

• If possible, help select the supplier.
  – Ask the supplier up front about CCS.
  – Demand legal indemnity from your upstream!

What Can You Do About This? (3)

• But, most importantly:
• Please join Conservancy’s Coalition.
• For context, a bit of the coalition’s history:

Historical BusyBox Enforcement

• Erik Andersen rewrote BusyBox from scratch (starting 2001).
• BusyBox slowly but surely became standard userspace for embedded systems.
• Linux plus BusyBox:
  – Standard for embedded systems.
  – Usually out of compliance.

Just Look Busy!

• BusyBox enforcement was de-facto for Linux.
  – The Tempest in a Toybox
  – BusyBox copyright holders request comprehensive GPL compliance.
  – Some Linux developers felt this was unfair...
  – ...but other Linux developers supported it.
  – (i.e., community was already split on this question.)
• BusyBox copyright holders don’t stand alone.

Busybox is arguably the most litigated piece of GPL software in the world. ... Litigants have sometimes requested remedies outside the scope of busybox itself...
— Tim Bird of Sony Corporation, in January 2012
Denys, The Voice of Reason

- Current BusyBox maintainer has that special skill of Free Software developers ...
  - ... to find the sane arguments hidden among troll-ish attacks.
- I walk through Brussels on the phone with Denys ...
  - ... the day before FOSDEM 2012 ...
  - ... and he convinces me:
- To continue with enforcement, Linux developers must be involved.

Garrett, Linux’s Freedom Fighter

- For years, Matthew Garrett had asked me to help him enforce the GPL on Linux.
- I’d told him that as it stood, it was easier to just work based on BusyBox.
- After so much had changed, it made sense to simply engage directly on behalf of Linux developers.
  - & there were many others who felt the same as Matthew did.
- GPL Compliance Project for Linux Developers gives structure to Linux compliance activity.

Expanding the Coalition

- On 2012-05-29, Conservancy announced expanded GPL enforcement efforts.
- Conservancy now actively enforces GPL for:
  - BusyBox, Linux, Samba, Mercurial
- Linux is not a full Conservancy member project:
  - Conservancy enforces for a coalition of about a dozen prominent copyright holders.
  - Matthew Garrett & David Woodhouse are the most public.
  - We expect to offer this service to more projects.
The Great Queue

- We’re aware of hundreds of embedded Linux GPL violations.
  - Each one takes 40-100 hours of work to resolve.
  - Over a period of usually 3-6 months.
- The CCS issue is the most difficult:
  - CCS candidates just don’t build.
- But, we’re facing a worse problem everywhere.

Linux’s GPL Elephant

- I used to avoid the elephant, but now it’s the central issue of compliance.

Linux’s GPL Elephant

- Are Linux modules derivative/combined works of/with Linux?
  - I & our lawyers believe they almost always are.
  - Many corporate lawyers disagree.
- Case law is limited:
  - Both sides believe they’re correct.
  - No general rule: the actual facts of a specific situation always matter.
  - This is the exact type of issue that becomes a big court case.
- My political opponents call this: “the ground war of GPL”
  - Maybe it’s time for that ground war.

Biggest Way You Can Help

- You’re all embedded Linux developers.
  - That means it’s likely your copyrighted work that violators infringe.
  - Only you can help your users.
- OTOH, maybe you don’t care about the GPL or the freedoms it protects.
I don’t blame you if you don’t …
… the GPL doesn’t require you to *like* the license.

• But, if you *do* care, you can join our coalition:
  – To join the GPL Compliance Project for Linux Developers …
  – … see me after the talk; I have blank forms with me. :)

**More Info / Talk License**

• URLs / Social Networking / Email:
  – Sign Up Today as part of the [*GPL Compliance Project for Linux Developers*](https://sfconservancy.org/)
  – A Book I helped write: [*Copyleft and the GNU General Public License: A Comprehensive Tutorial*](https://sfconservancy.org/) is available.
  – Conservancy: sfconservancy.org & @conservancy
  – Me: faif.us & ebb.org/bkuhn
  – Slides: ebb.org/bkuhn/talks & gitorious.org/bkuhn/talks (source)
  – DONATE: https://sfconservancy.org/donate/

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