

Why the GPL might not Destroy the Universe



A soothing antidote
for the
panicked masses

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MIL-OSS 2011 IGNITE Session

Version 2011-09-02



- The GNU General Public License (GPL) will come in the night and:
 - Burn your crops!
 - Kill your children!
 - And worse, steal your “intellectual property”!
- It makes you release all your software publicly!
- Businesses will collapse!
- Programmers will starve!
- **PANIC NOW!!!!**

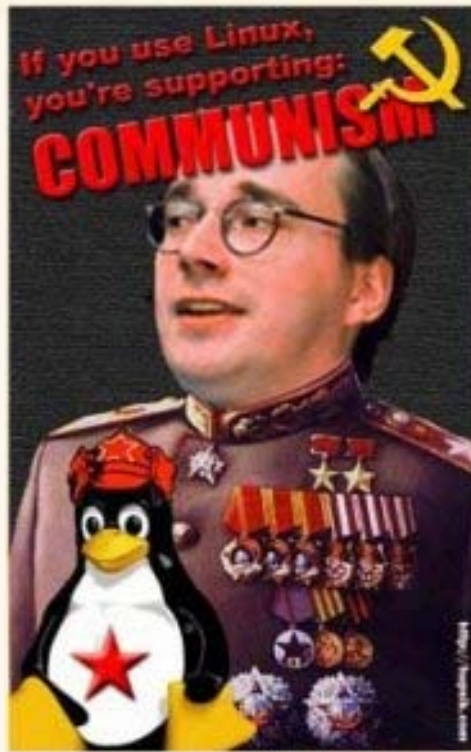


The “viral” GPL



IDA

GPL (or OSS) is COMMUNISM! Protect your family! Your livestock!



- Thankfully Microsoft has alerted red-blooded Americans!



- Bill Gates: free culture advocates “modern-day sort of communists” & “Do you understand the GPL?... they’re pretty stunned when the Pac-Man-like nature of it is described to them”



- Craig Mundie: “When the resulting (GPL) software product is distributed, its creator must make the entire source code base freely available to everyone, at no additional charge. This viral aspect of the GPL poses a threat to the intellectual property of any organization making use of it [and] fundamentally undermines the independent commercial software sector...”



- Steve Ballmer: “Linux is a cancer that attaches itself in an intellectual property sense to everything it touches”



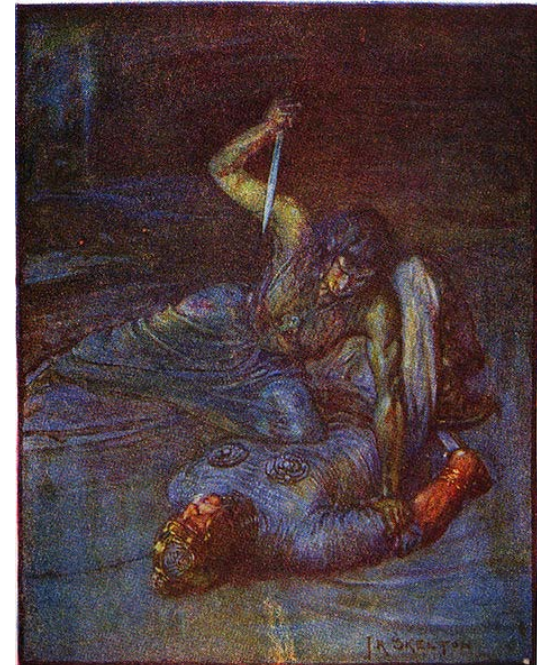
- Jim Allchin: OSS (or at least government-developed GPL) is un-American, a threat to innovation, & a direct attack on IP

(All quotes here from 2001-2002)

- Microsoft's "Windows Services for Unix" includes GPL!
- Microsoft 5th-largest corporate contributor to Linux kernel version 3.0 (2011) – GPL!
- Microsoft has partly abandoned the anti-GPL cause
 - Making money is more important?!?
 - Where is their commitment to capitalism?!?



How could
Microsoft attack
such a righteous
cause?





IDA

The GPL will cause all businesses to collapse! Programmers will starve!

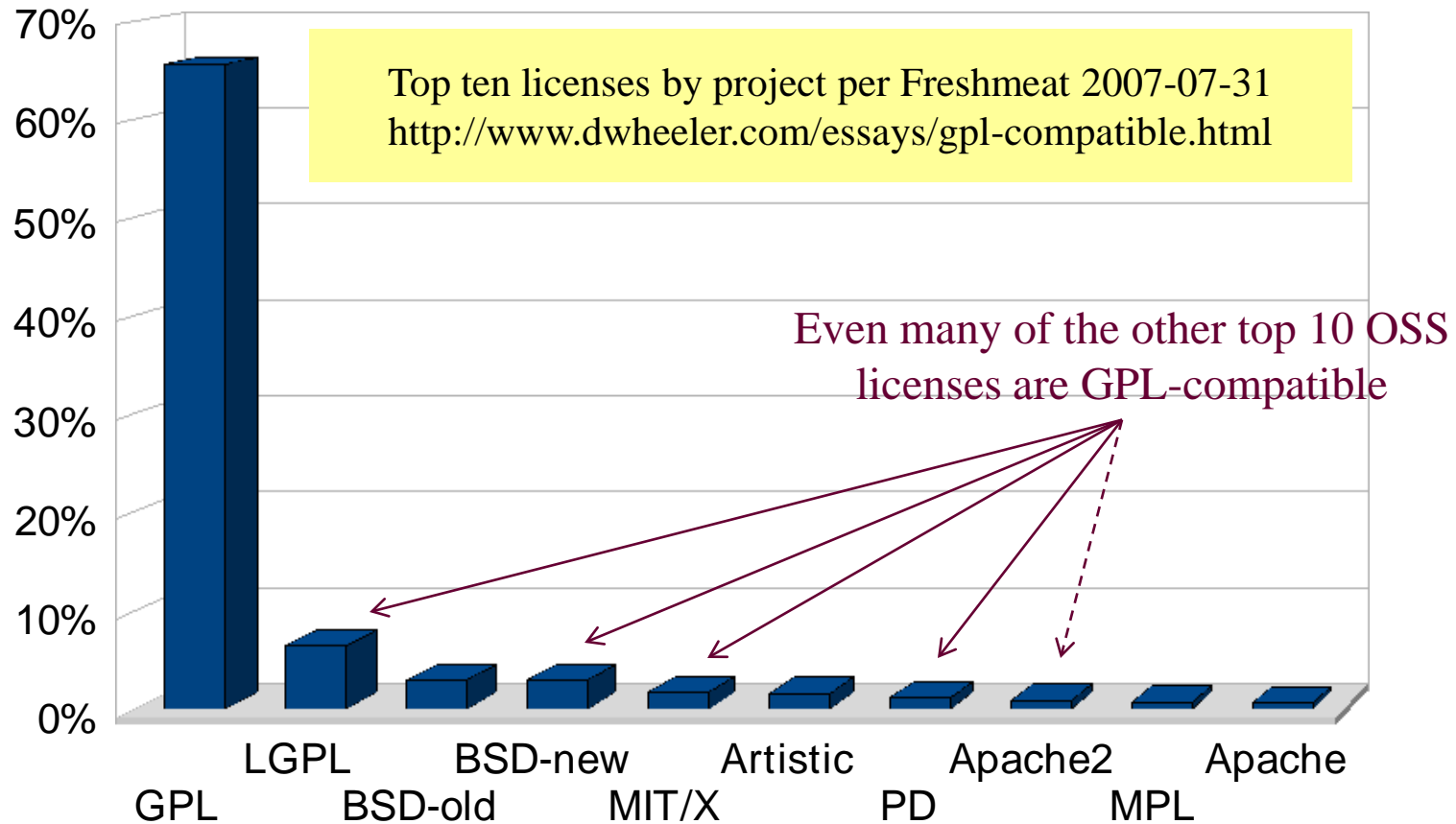


- Well, except Red Hat
- and Google
- and all other businesses that adjust to the changing business environment
- and the programmers
 - 70% of the (GPL) Linux kernel developers are provably being paid to do so as of 2010 (probably more)
 - “Now corporate America is getting involved in the (OSS) development process... they start out as a user, but when their needs outstrip existing software, they migrate from being mere users to being developers” - Brian Elliott Finley

- “There is a misconception that the Government is always obligated to distribute the source code of any modified open source software (OSS) to the public, and therefore that OSS should not be integrated or modified for use in classified or other sensitive DoD systems.”
 - “Clarifying Guidance Regarding OSS,” 2009,
<http://cio-nii.defense.gov/sites/oss/>
- “There is no DoD policy forbidding or limiting the use of software licensed under the GNU General Public License (GPL)... The DoD already uses a wide variety of software licensed under the GPL... This should not be surprising; the DoD uses OSS extensively, and the GPL is the most popular OSS license. ”
 - DoD OSS FAQ, <http://cio-nii.defense.gov/sites/oss/>
- Government even releases GPL'ed code (e.g., NSA's SELinux)



... and the GPL is the most popular OSS license (maybe there's a reason)



“The GPL sufficiently dominates in DoD applications for a ban on GPL to closely approximate a full ban of all [OSS]... a DoD policy that bans any use of FOSS products would likely have ... largely negative... short-term and long-term impacts on DoD”

4 September 2011

[MITRE2003]

1. Misunderstandings
 - GPL never says “distribute everything you do to the public”
2. A mistaken faith in “security through obscurity”
3. Not realizing different licenses emphasize freedom of different recipients
4. Incompatibility with your current business model
 - Maybe it’s not the GPL that is your problem

- Two versions: 2 (GPLv2) and 3 (GPLv3)
- GPLv2 really says: “You may copy and distribute the Program...[in] executable form... provided that you also:
 - Accompany it with the complete corresponding machine-readable source code, which must be distributed... *or*
 - Accompany it with a written offer, valid for at least three years, to give ... a complete machine-readable copy of the corresponding source code” ...
- GPLv3 similar
- Most GPLv2 say “version 2 or later”



- Put more simply, the GPL says:
 - “You can make improvements to my work...”
 - “but in exchange, all recipients (transitively) of the modified version must have the same rights you received”
 - Like a consortia, without lots of legal overhead
- The term “intellectual property” is really misleading
 - Software isn’t physical property!
 - Thinking it is will lead you to false conclusions
 - Use “data rights” (federal term) or “intellectual rights” instead
- Legally-enforceable sharing

- DoDD 8320.02: “Data is an essential enabler of network-centric warfare (NCW) and shall be made visible, accessible, and understandable to any potential user in the Department of Defense as early as possible in the life cycle to support mission objectives.”
- “All I really need to know about how to live and what to do and how to be I learned in kindergarten. Wisdom was not at the top of the graduate school mountain, but there in the sand pile at school.....
 - Share everything
 - Play fair
 - Don't hit people
 - Put things back where you found them...”
 - *All I really need to know I learned in Kindergarten*, Robert Fulghum

Is requiring that source be shared really that awful?

IDA

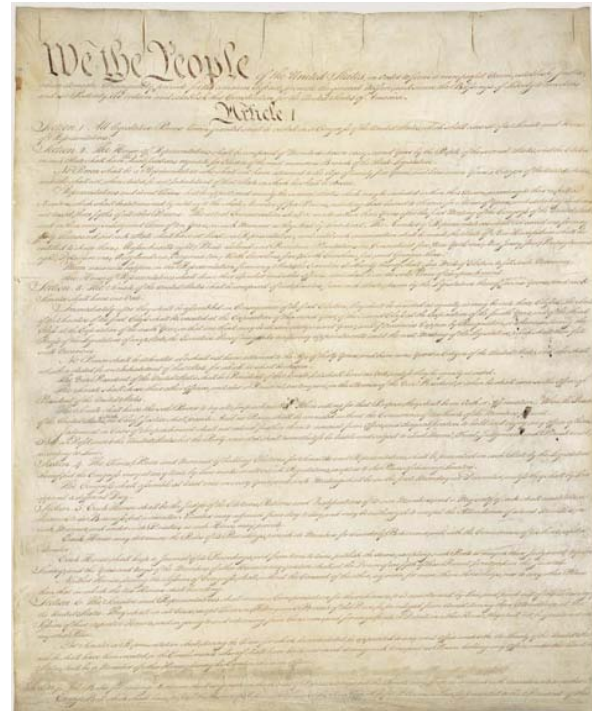
- “Many FLOSS developers prefer the GPL, because they believe [it]
 - (1) provides a better quid-pro-quo for developers
 - (2) establishes collaboration between people and companies better than consortia
 - (3) protects their work in today’s less-than-kind environment, and/or
 - (4) encourages increasing the amount of Free Software.”
- Linux (GPL) market growing, *BSD are not
- NetApp’s improvements to BSD-licensed code are not contributed back but its improvements to GPL-licensed code have been (Jeremy Allison’s “Freedom Fighters”)
- BSD-style licenses are “a really good license for your competitor to use” – Eben Moglen



<http://www.dwheeler.com/essays/gpl-compatible.html>



- Performing work-for-hire (e.g., contracting) is not distribution if all rights return to hirer
 - Directly clarified in GPLv3
- Copying within the U.S. federal government generally considered not distribution - *within* organization
 - It's a single organization, created by the U.S. Constitution
 - DoD 2009 "Clarifying guidance regarding OSS" (2)(2)(e) implies this



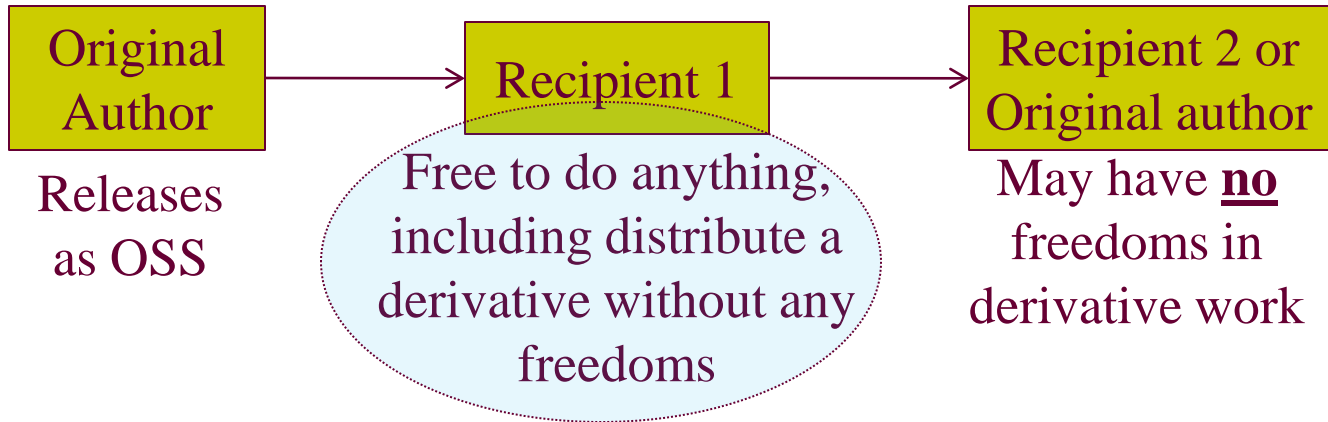
- “Distribution” can only happen if your program is linked
- So make your systems modular (they should be already)
 - Then they aren’t linked
- Use modularity techniques
 - Separate layers
 - Separate data from program (unclass program, classified data)
 - Define clean interfaces

- Again, often a non-issue
- There is no requirement that a modified GPL program be released to the public
- You only need to give source to the recipient of executables
 - Classified GPL executables are okay!
 - Only give classified GPL executables to those authorized to have classified material
 - If there's a "distribution" they can then have the source

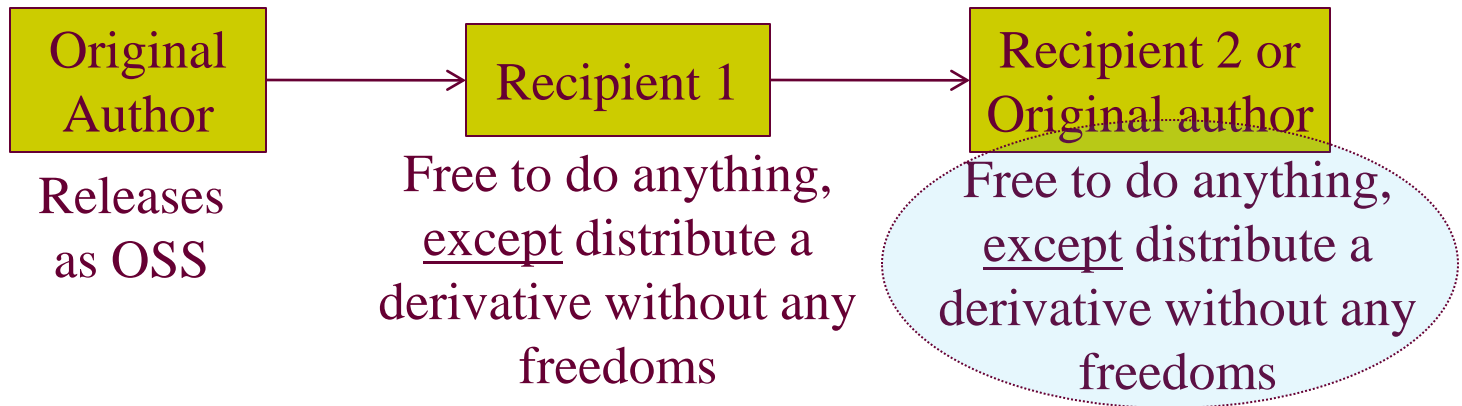
- Attackers generally don't need source
 - Executables are typically enough
 - So is the ability to send input & see the results
 - If hiding source was that helpful, proprietary programs wouldn't be broken
- Remember, you can create source from executables
 - Hiding source inhibits *change* (to inhibit competing suppliers)
 - It does little to prevent finding vulnerabilities
- “Security through obscurity” is nonsense unless you can keep *everything* secret
 - Source, executable, *and* inputs/outputs

Issue 3: Not realizing different licenses emphasize freedom of different recipients

Permissive
(BSD-style)



Strong
Copyleft
(GPL)

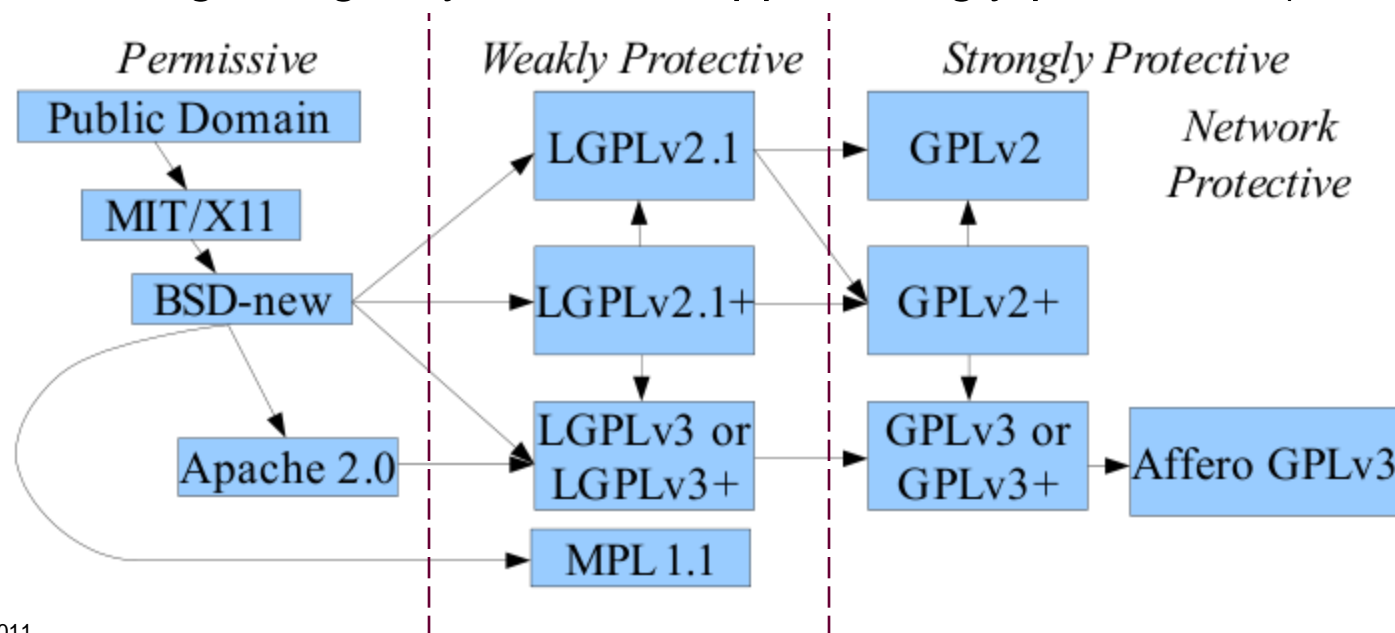


**GPL & BSD both provide freedom,
but emphasize freedoms of different recipients**



- “All of the major [OSS] licenses, including GPL, permit commercial sale of [OSS] software” [MITRE2003]
- GPL incompatible with business models that require that customers:
 - Cannot review source code
 - Cannot repair/improve
 - Cannot have alternative suppliers
- Lock-in models can be lucrative...
 - But customers *like* having these freedoms
 - You’ll need to compensate, & even then...
 - Competitors might offer these freedoms as a competitive advantage

- If modification of existing project code, include its license
- Use a common, existing, GPL-compatible license
- Best meets your goal:
 - Use of new tech/standard: Permissive (MIT, BSD-new, Apache)
 - \$ savings/longevity/common library: Weakly protective (LGPL)
 - \$ savings/longevity/common app: Strongly protective (GPL)





- *Not* everything should be GPL'ed
- But people need to get over the fear of the GPL
 - Learn what it *actually* means
- GPL is a “least common denominator” standard OSS license, enabling collaboration
- Less FUD, more cooperation

- This is an IGNITE presentation for MIL-OSS 2011
 - 2011-08-30, scheduled for 5:30pm-7pm, given 9:10pm
- Ignite presentation rules:
 1. 20 slides only - no sound, no video, etc. Pics/text only
 2. Slides changed automatically every 15 seconds
 3. 5 minutes total
- For more on the format:
 - <http://www.speakingaboutpresenting.com/content/fast-ignite-presentation/>
- References/credits are in the slide notes