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Publicly Releasing Open Source Software (OSS) Developed for the U.S. Government

A guide for the perplexed
on what's permitted in typical contracts
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- Open Source Software (OSS) is commercial
- When should the DoD release government-funded software as OSS?
- The five questions
- Who has authority?
- Plan ahead!

This presentation is not legal advice, and variations of specific facts can produce different results

- “Open Source Software is software for which the human-readable source code is available for use, study, reuse, modification, enhancement, and redistribution by the users of that software” [DoD 2009]
- OSS almost always commercial per U.S. law; a commercial item is “(A) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and that (i) has been sold, leased, or licensed to the general public...” [41 USC 403]
 - See also FAR 2.101, DFARS 212.212 & 252.227-7014(a)(1)
- Government & contractors at all tiers must prefer commercial software [10 USC 2377, FAR part 12]; government must conduct (commercial) market research in procurement prep [41 USC 253a]
 - Government employee/contractor who ignores OSS is breaking the law
 - A rational decision must evaluate total cost

See: “Open Source Software Is Commercial”, DACS

Software Tech News, Feb 2011, <http://journal.thedacs.com/issue/56/151>

- 2009 DoD memo says that “software items, including code fixes and enhancements, developed for the Government should be released to the public (such as under an open source license) when all of the following conditions are met:
 1. The project manager, program manager, or other comparable official determines that it is in the Government’s interest to do so, such as through the expectation of future enhancements by others.
 2. The Government has the rights ...
 3. The public release of the item is not restricted by other law or regulation...”
- Releasing software as OSS enables future competition
- “We the people” paid for it!



The US federal government or contractors may release software developed using government funds to the public, as open source software (OSS), depending on:

1. What contract applies (including terms & decisions)?
2. Do you have the necessary copyright-related rights?
3. Do you have the other intellectual rights (e.g. patents)?
4. Do you have permission to release to the public?
5. Do you have all the materials (source code) & are they properly marked?



What contract applies (including terms & decisions)?

- Most government contracts use one of a small set of standard “data rights” clauses – find out what they are
 - Federal Acquisition Regulation (FAR) 52.227-14, 52.227-17
 - Defense FAR Supplement (DFARS) 252.227-7014, 252.227-7017, 252.227-7020
- A contracting officer can make decisions that change what’s possible
- Pre-existing commercial software, ***including*** OSS
 - Government usually accepts the usual license terms
- This talk focuses on software developed as part of a government contract (new software or modifications)

- If government employee (including military) develops software as part of official duties, it is a “work of the U.S. government” (Case A)
 - Then the government can effectively release it as OSS. In practically all cases, the software is not subject to copyright protection inside US (17 USC 105), so if released, anyone in US can read, use, modify, redistribute it
 - Outside US, government *could* apply copyright & OSS release
 - If this software is part of a larger work, the *combined* work can have an OSS license - so government employees *can* submit patches to a larger OSS work
- In other cases, depends on contract clause
 - Following slides discuss some typical cases
 - Just about anything is negotiable, so *check the contract*

Conditions	Case	Can government release as OSS?	Can contractor release as OSS?
Government has <u>not</u> granted the contractor the right to assert copyright	B	Yes. The government normally has unlimited rights (essentially the same rights as a copyright holder) per (b)(1). In the FAR, source code is software, and software is data, so source code is data	No. The contractor may request permission to assert copyright
Government <u>has</u> granted the contractor the right to assert copyright	C	No. The government does not have sufficient rights, per (c)(1)(iii); it cannot distribute copies to the public. The government should be wary of granting a request to assert copyright, as it permanently loses many rights to data it paid to develop	Yes. The contractor may assert copyright

Conditions	Case	Can government release as OSS?	Can contractor release as OSS?
Developed exclusively with government funds	D	Yes. The government has unlimited rights (essentially the same rights as a copyright holder). Per (b)(2)(iii), the 5-year period can be negotiated	Yes. The contractor may assert copyright
Developed by mixed funding & contract mod > 5 years ago	E		
Developed by mixed funding, contract mod < 5 years	F	No. The government doesn't have sufficient rights. 5-year period can be negotiated. If mixed funding, has "government purpose rights"; if private expense only, "restricted rights."	
Developed exclusively at private expense	G		

DFARS 252.227-7018 (June 1995): Small Business Innovation Research (SBIR)

Conditions		Case	Can government release as OSS?	Can contractor release as OSS?
Not developed exclusively at private expense	< 5 years after <u>completion</u> of project	H	No. Government doesn't have sufficient rights per (b)(4)(i)	Yes. The contractor has copyright
	> 5 years after <u>completion</u> of project & no alternate I	I	Yes. The government has unlimited rights per (b)(1)(vi).	
	> 5 years & alternate I	J	Sometimes, see alternate I	
Developed exclusively at private expense		K	No, see (b)(2)	

DFARS 252.227-7020 (June 1995)

“Special works” clause

Conditions	Case	Can government release as OSS?	Can contractor release as OSS?
Work first produced, created, or generated & required to be delivered under the contract	O	Yes. The government receives copyright per (c)(2)	No. The government has copyright
Other copyrighted works incorporated into a required deliverable	P	Normally yes. Per (c)(3) and (d), the contractor must normally grant to the government a long list of data rights when incorporating other copyrighted works, and these rights permit OSS release. Exception: Government contracting officer gives written approval, per (d)	Normally yes. The contractor must already have the rights for OSS release to incorporate it, unless given written approval

Do you have the other intellectual rights (e.g., patents)?

- FAR & DFARS call these “data rights”
 - Often called “intellectual property rights” — but the term “property” is misleading
 - Intellectual works (e.g., software) are *fundamentally* different from physical property; they can be consumed by one without preventing simultaneous consumption by others (“non-rivalrous”)
- Determine if there are any relevant patents, and if so, what they are
 - Patents create many more complications!
- Trademarks & government seals: Remove if needed (not usually a big deal)

- Classification
 - Sometimes source code can be handled through document classification reviews
- Distribution statements (for contractors)
- Export controls
 - Export Administration Regulations (EAR) issued by Dept of Commerce
 - International Traffic in Arms Regulations (ITAR) issued by Dept of State
 - DoD does *not* have the authority to grant export control licenses
 - If software is intended to be released to the public, ask the cognizant U.S. government department or agency (e.g., DoD) approve its *public* release: 15 CFE 734.3(b)(3) & 22 CFR 125.4(13)

- You have to *have* the source code to release it
 - Government & upper-tier contractors should insist on receiving it
 - Make sure it's really the source, not just binaries or pictures of the source code or automatically-generated source code
- Make sure it's marked correctly
 - Companies may include inappropriate restrictive markings
 - Challenge inappropriate markings *promptly* and *early*
 - DFARS 227.7203-13 includes a 3-year time limit for challenges
 - Improper markings often copied elsewhere
 - Fixing early fixes saves everyone time

- Determining authority between contractors can be tricky
 - Depends on the contracts, not always the lead contractor
- Inside contractor: Depends on the company
- On DoD government side, 2009 memo says it is decided by the “program manager, program manager, or other comparable official”

- If you plan to release as OSS, include it in the contract
 - Make sure software source code is delivered
 - Make sure it's released with the appropriate rights
- Talk to others who have experience with OSS
 - Q: What is it doing? A: It's learning!
- For day-to-day how-to, see:
 - *Open Technology Development (OTD): Lessons Learned & Best Practices for Military Software*
 - *Producing Open Source Software* by Karl Fogel,
<http://producingoss.com/>

To release software to the public as OSS, ask:

1. What contract applies (including terms & decisions)?
2. Do you have the necessary copyright-related rights?
3. Do you have the other intellectual rights (e.g. patents)?
4. Do you have permission to release to the public?
5. Do you have all the materials (source code) & are they properly marked?

If you plan to do it ahead-of-time, put it in the contract!

It's often possible to release, as OSS, software developed using government funds

- ★ “Publicly Releasing Open Source Software Developed for the U.S. Government” by Dr. David A. Wheeler, *DoD Software Tech News*, February 2011, Vol. 14, Number 1, <http://journal.thedacs.com/issue/56/180>
 - 1-page summary “OSS Releasability Quick Reference” by Kane McLean, <http://mil-oss.org/resources/software-copyright-assertion-rights-quick-reference.pdf>
- *Open Technology Development (OTD): Lessons Learned & Best Practices for Military Software*, by John Scott, David A. Wheeler, Mark Lucas, and J.C. Herz, <http://cio-nii.defense.gov/sites/oss/OTD-lessons-learned-military-signed.pdf> or <http://mil-oss.org/otd> (includes “Publicly Releasing...”)
- *Producing Open Source Software* by Karl Fogel, <http://producingoss.com/>
- “Frequently Asked Questions about Copyright and Computer Software” http://www.cendi.gov/publications/09-1FAQ_OpenSourceSoftware_FINAL_110109.pdf
- MIL-OSS site & mailing list