To: All DOE Patent Counsel

Date: April 29, 2010

Re: DOE LABORATORY OPEN SOURCE SOFTWARE: ADVANCE DOE PROGRAM APPROVAL AND OTHER OSS LICENSING ISSUES

INTRODUCTION

On Feb 1, 2002, DOE Patent Counsel issued an IPI-II-1-01 for "Development and Use of Open Source Software." A year later, subparagraph (f) of the Rights in Data clause of the M&O Contract (DEAR 970.5227-2) was developed to incorporate the IPI into the M&O Contract. Before this change, a DOE laboratory was required to seek DOE approval from both the patent counsel and the cognizant funding program before asserting copyright in any software. The new OSS clause was developed because it was not necessary for DOE patent counsel to review each OSS request before a laboratory could assert copyright. Program approval for release of the software as OSS is still required. However, the clause provides that DOE patent counsel may provide sole approval if program approval is not practicable. The new clause has been incorporated into many M&O Contracts by the DOE Contracting Officers. It is currently pending to be included in the DEAR.

In 2003, and the Office of Science/Office of Advanced Scientific Computing Research (OASCR) and the Office of Defense Programs/Office of Advanced Simulation and Computing (ASCI) issued a policy (Policy Guidance—OSS License Release of Software Developed with ASCI and OASCR Funding) that directs the DOE national laboratories to release all publicly releasable software, which is created from funding by its programs, as either OSS or Government software distributed by DOE's Energy Science and Technology Software Center (ESTSC). If a laboratory wants to commercialize the software with royalty-bearing licenses, a laboratory must seek OASCR/ASCI approval. This policy is still in effect and is not altered by this IPI.

Several DOE laboratories have had difficulty in getting DOE Program approval for release of OSS over the last eight years. This was due to funding program confusion over the OSS approval process. This is more evident with funding from other government agencies because statutes and rules governing these agencies automatically allow the recipient of funds to assert copyright in software without agency approval.

In addition, DOE and its laboratories have encountered additional issues regarding OSS over the last eight years when DOE first granted the OSS authority to its laboratories. The last section of this IPI will address some of these recent issues.

CANCELLATION OF PREVIOUS IPI

IPI-II-1-01 had two major sections. First, the IPI established the authority of OSS at the laboratories that was later amended into the M&O Contracts and codified in the DEAR. Second, the IPI outlined guidance for using OSS at a laboratory. Some of this guidance is included in this IPI. Therefore, IPI-II-1-01 is hereby cancelled.

DOE PROGRAM BLANKET APPROVAL:

At present, only the OASCR/ASCI programs have issued a blanket approval of all software to be licensed as OSS. As for other DOE Programs, it is recommended to have a blanket approval from all DOE programs to issue software as OSS. Over the last eight years, the laboratories have requested DOE

Programs for approval to assert copyright for OSS and patent counsel is not aware of any case where DOE Program withheld that approval.

DOE's statutory mandate is to disseminate widely the results of research and development at DOE facilities. This mandate first appeared in the Atomic Energy Act of 1954, at 42 U.S.C. § 2051, which provides that no arrangements shall contain any provisions or conditions which prevent the dissemination of scientific or technical information except to the extent such dissemination is prohibited by law. Similar provisions are found in the Energy Reorganization Act of 1974, at 42 U.S.C. § 5817, and the 1977 Department of Energy Organization Act, at 42 U.S.C. § 7112. By allowing laboratories to license software as OSS, DOE's dissemination mandate is satisfied.

Although no DOE Program has objected to laboratory software being licensed as OSS, DOE Program should have an opportunity to object (as opposed to approve). However, as stated above, it often proves difficult to timely obtain a programmatic approval. Therefore, a laboratory must give notice to the DOE funding program (the DOE program funding 50% or more of the software development) that a laboratory intends to release the software as OSS. If after two weeks, the DOE funding program has not objected, then a laboratory may assert copyright in OSS. See Appendix A for a sample Notice to DOE Program.

DOE patent counsel is issuing a blanket policy that a laboratory may assert copyright and license code as OSS for any DOE funded software unless one of the following applies:

a) a specific prohibition to release the software exists (e.g., export control beyond ER99 such as encryption software, contains third party proprietary software, contains classified codes, etc.);
b) a DOE program overrides such release as OSS (e.g., HPSS software commercialization by IBM and laboratories); or
c) DOE funding program objects to releasing OSS within two weeks of being notified.
d) special grant terms and conditions under a contract or financial assistance

Although the Department of Homeland Security (DHS) has equal access to DOE laboratories under 6 U.S.C. § 189, this blanket approval will not apply to any DHS funded (even partially funded) software. Presently, DHS Program approval must be individually granted. However, this policy may be amended with DHS approval in the future.

OTHER STATE AND FEDERAL AGENCY APPROVALS:

There are several Federal Agencies that by either contract or financial assistance fund DOE laboratories and grant the right to assert copyright in all software. The following agencies have statutory provisions so that DOE laboratories can proceed with licensing of OSS without formal approval from such Agency. However, any special grants terms or conditions that override the right to assert copyright must be followed by DOE laboratories.

A: Contract Terms and Conditions (T&C)

Department of Defense (DOD): DFAR 252.227-7014 Rights in Noncommercial Computer Software and Non-Commercial Software Documentation (JUN 1995) In this clause, paragraph (b) states "All rights not granted to the Government are retained by the Contractor." The Government has unlimited rights in "Computer software developed exclusively with Government funds." Therefore, a laboratory asserting copyright to release the software as OSS would be in compliance with this clause. There is no prohibition for a laboratory to assert copyright or request approval from DOD in advance. Therefore, DOE permits that a laboratory may assert copyright in OSS without DOD approval when this clause is used in a contract or Inter Agency Agreement (IAA). Similarly DFAR 252.227-7013 Rights in Technical Data—Noncommercial Items (NOV 1995) could be interpreted the same way.

FAR Rights In Data Clause (FAR 52.227-14): Most likely, laboratories will receive Agency funding via a subcontract from a private sector with this clause. That Agency and the Statement of Work of that contract with the private sector would apply.

B: Financial Assistance Award T&Cs:

DOD Grants: Most DOE laboratories qualify under 32 CFR part 32 entitled ADMINISTRATIVE REQUIREMENTS FOR GRANTS AND AGREEMENTS WITH INSTITUTIONS OF HIGHER EDUCATION, HOSPITALS, AND OTHER NON-PROFIT ORGANIZATIONS. More specifically, subsection 32.36 states:

> Sec. 32.36 Intangible property.
>
> (a) The recipient may copyright any work that is subject to copyright and was developed, or for which ownership was purchased, under an award. DoD Components reserve a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes, and to authorize others to do so.

Therefore, a laboratory may assert copyright in software for OSS.

National Institute of Health (NIH): The latest NIH Grants Policy Statement is dated December 2003. In Part II (Terms and Conditions of NIH Grant Awards), the Rights in Data (Publication and Copyrighting) section states:

> "Except as otherwise provided in the terms and conditions of the award, any publications, data, or other copyrightable works developed under an NIH grant may be copyrighted without NIH approval."

Therefore, a laboratory may assert copyright in software for OSS purposes under NIH grants. See the NIH webpage for more details: (http://grants.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part7.htm)

National Science Foundation (NSF): The latest NSF Grants General Conditions (Jan 5, 2009) states in paragraph 18 the following:

> "Except as otherwise specified in the award or by this paragraph, the grantee may own or permit others to own copyright in all subject writings."

Therefore, the laboratory may assert copyright in software for OSS purposes under NSF grants. See the NSF webpage for more details: http://www.nsf.gov/pubs/gc1/jan09.pdf

This list is not exhaustive, but probably covers the majority of the outside funding at laboratories. Laboratory counsel must verify the particular provisions in these funding agreements.

GUIDANCE AND APPROVALS FOR ADDITIONAL OSS ISSUES:

Over the last eight years, there have been several issues that Laboratories have dealt with that required DOE guidance.

A. Third Party OSS:

In order to continue DOE's programmatic missions, laboratories may find it useful to download OSS from non-government sites and make modifications or derivative works to the software in order to satisfy a laboratory's goals. The Government realizes that this can be a substantial cost savings by avoiding the expensive process of developing software. Therefore, DOE encourages laboratories to

use OSS when possible. However, the following guidance should be followed:

i. Click License Approval of Third Party Software. Most of OSS requires simply clicking to approve a license agreement before downloading the OSS. Laboratory counsel should be consulted to make sure that these licenses don't contain provisions contrary to DOE policy. However, laboratory counsel may not be consulted before clicking "yes". DOE patent counsel recommends that laboratory counsel issue guidance (including downloading the OSS, uploading new code to the licensor and imbedding OSS in DOE funded work) or work with their IT specialists that may restrict unauthorized software downloads.

ii. Derivative works from Third Party OSS. A laboratory may assert copyright in OSS derivative works from third party OSS without notice to DOE Program or approval from patent counsel when an OSS license requires such copyright. By doing so, Government works are being effectively distributed to the public. Since the derivative works would be fragments of object code or subroutines that are most likely useless to a user without the original OSS, a laboratory is not required to deposit this object and source code in ESTSC (Energy Science and Technology Software Center).

iii. Copyright Transfer to Third Party. Occasionally, the click licenses (referenced above) include a provision where a laboratory is required to transfer copyright to the third party OSS licensor. Usually, Laboratory commercial licenses maintain the Government Use License to use the software for Government purposes. Under OSS, there is no explicit Government Use License; however, the Government and public have free access to use the OSS and the Government Use License is satisfied in theory. When transferring copyright to third party licensor, there is an inherent risk that the Government's royalty-free use of the software could end if the OSS is either removed by the Licensor or only commercially licensed at a later date. Therefore, patent counsel is establishing a 25% test to support third party OSS. If a laboratory contribution results in less than 25% of the total OSS code, then transfer of copyright is permitted. The Government hasn't lost much since the Government funded portion of the software probably doesn't function without the rest of the code and would be considered a de minimus contribution. As in (ii) above, notice to DOE Program and reporting to ETSTC are waived.

In general, laboratory counsel may not be consulted before a researcher has assigned intellectual property rights by clicking on the license. Since the M&O Contractor hasn't officially received title from DOE by following the M&O Contract provisions, an unperfected transfer of copyright has occurred. Therefore, by this IPI, DOE patent counsel presumes that copyright has been successfully transferred from DOE/M&O contractor/laboratory employee to third party licensor.

If a laboratory contribution is greater than 25% of the total code, then DOE patent counsel must be consulted. It is considered a laboratory resource that is being used and DOE Program should be informed to determine the best course of action.

iv. Restrictions on Derivative Works of Third Party OSS. When a laboratory creates a derivative work, a third party OSS license may control a laboratory's use and redistribution of such OSS by prohibiting redistribution or restricting the license terms for redistribution of the derivative work. Laboratory counsel should be consulted to determine whether there are specific limitations in the OSS provider's license and how such limitations may affect the ability of a laboratory to use such third party OSS and, where appropriate, to redistribute the derivative work. If that third party OSS license permits a laboratory to distribute a derivative work, the laboratory must comply with the terms of that OSS License, and if required by the OSS License, give proper recognition of authorship and annotation of any modifications. Even if not required, a laboratory should include

appropriate professional references to the original third party OSS and additional resources describing the work.

v. Pass-through of legal terms and conditions with Original OSS Source. If a laboratory incorporates third party OSS into or distributes third party OSS with laboratory generated software, the original OSS License including all of its terms and conditions might be required to be redistributed with the OSS. Such terms might include a warranty, a disclaimer, a requirement to give credit, and a restriction on endorsements. Where an OSS License includes unusual terms (such as a warranty that may require registration with the original OSS owner), a laboratory should consider methods of passing such terms through to recipient while adhering to the requirements of its M&O Contract (e.g., in such an instance, a laboratory might include information about the warranty or hyper-link to the original OSS site for registering a warranty, but a laboratory should never grant a warranty of its own that violates the terms of its M&O Contract).

vi. If a laboratory decides to commercially license (royalty bearing) a software package that combines a third party's OSS and Laboratory derivative works, then a laboratory will need to seek approval to assert copyright in the derivative work from DOE patent counsel by following its M&O Contract provisions. Also, laboratory counsel will need to verify that such commercial licensing does not violate the third party OSS license. A laboratory counsel determination should be submitted in writing to DOE patent counsel as part of the request to assert copyright.

B. Laboratory Licensing Software as Both OSS and Commercial

Companies have software that is licensed under both OSS and commercial licenses. For example, a company may license the OSS software for fixing bugs and improving the code. However, a potential licensee would like to commercially license a stable-bug free code which might also include warranties. Therefore, the company may "freeze" the OSS code at specific times and commercially license these versions.

DOE laboratories have expressed an interest in also doing a similar process. Once copyright is asserted, it isn't technically for only specific uses such as OSS. However, licensing under the M&O Contract for commercial purposes invoke certain provisions. Therefore, a laboratory will need to seek DOE approval to commercially license its OSS. Patent counsel will decide with input from DOE Program whether specific OSS should be commercially licensed. Patent counsel may consider the following: a) will the OSS version still be available to the public to satisfy DOE's dissemination mandate and b) what advantages to having a commercial license for technology transfer mission, which should not emphasize royalty income (for example, private sector companies preferring to license "frozen" versions of software instead of changing OSS and may not be using DOE funded software).

C. Laboratory OSS

i. Provide Public Access to the OSS: A laboratory should monitor the use (number of downloads, number of accepted OSS licenses, etc.) of its OSS. The size and nature of the intended audience of OSS will vary from code to code and the mechanism of public access and distribution should be tailored to its intended audience. Where an OSS product is not being adequately disseminated, a laboratory should periodically consider whether additional efforts should be undertaken to promote the software (e.g.., hyper-linking other locations to that software) or whether a laboratory should remove the OSS from the laboratory's available software inventory (i.e., where the software has become obsolete, where the software is no longer part of an active research

program, or where the cost of continuing to make the OSS available outweighs the benefit received by the intended community).

ii. Improving Laboratory Software with Third Party Contributions. A laboratory may request and accept voluntary submittals of third party contributions or derivative works of its laboratory distributed OSS. A laboratory should use reasonable efforts to assure that a third party has the legal right to make such submittals; as a minimum, a laboratory should establish a log (or other tracking method) describing submittals that add significant volumes of code or functionality, and include in the log copies of transmittal documents received with the software. Also, a laboratory should verify, to the best of their ability, that the submittal or derivative work does not contain viruses or other code destroying software before incorporating it into a new laboratory release or version. If there is an infringement complaint from a third party's derivative work, a laboratory should inform DOE and make an assessment on ability/cost/program impact to remove the infringing software. Either the laboratory or DOE can make the final determination on removal of suspect infringing software.

CONCLUSION

This IPI covers only OSS where a laboratory wants to assert copyright. If the software has been or will be patented, then IPIs for transferring the patented technology to the public may apply.

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APPENDIX A

NOTICE TO DOE PROGRAM
(To License DOE Funded Software as Open Source Software)

Software Code Name:
DOE Program Contact:
Date:

The Laboratory intends to license the above-identified software as opens source software (OSS). If you have any objections to such action, please contact me within two weeks of the date of this memo/email.

As background, DOE's existing Rights in Technical Data---Technology Transfer clause, including in our Management and Operating Contract, provides three mechanisms by which computer software first produced by the Contractor may make the software available to the public:

a) software may be made available without assertion of copyright or restriction of publication, effectively placing it in the public domain;
b) with DOE's permission, the contractor can be authorized to assert copyright and offer a commercial royalty-bearing license with DOE agreeing to restrict publicly releasing the software for five-year renewable periods. This approach was developed to enhance the dissemination of software produced by DOE contractors operating DOE laboratories by providing a more meaningful copyright protection;
c) software may be licensed as Open Source Software (OSS). The open source license makes the software freely available via the internet, by not requiring payment of a royalty, but may include conditions for further use and creation of derivative works. DOE prefers contractor's OSS licenses to allow liberal distribution without much restriction on redistribution of derivative works.

The Laboratory has made a determination that the software funded by your program will be distributed as OSS. The laboratory is required to notify your office of such determination and give you a chance to make an objection. If you decide to object, please indicate why you feel a different mechanism, for example, commercial licensing or not releasing the software to the public, would be more appropriate to further your DOE mission goals. If we receive an objection, we will consult with DOE Patent Counsel.