

APPROVAL DATE:

APPROVED BY: **Secretary of Administration**

POLICY TITLE: **Use of Open Source Software (OSS) and Open Standards**

DEFINITIONS:

Open Source Softwareⁱ

Introduction

Open source doesn't just mean access to the source code. The distribution terms of open-source software must comply with the following criteria:

1. Free Redistribution

The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale.

2. Source Code

The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a preprocessor or translator are not allowed.

3. Derived Works

The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

4. Integrity of The Author's Source Code

The license may restrict source-code from being distributed in modified form *only* if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.

5. No Discrimination Against Persons or Groups

The license must not discriminate against any person or group of persons.

6. No Discrimination Against Fields of Endeavor

The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a business, or from being used for genetic research.

7. Distribution of License

The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.

8. License Must Not Be Specific to a Product

The rights attached to the program must not depend on the program's being part of a particular software distribution. If the program is extracted from that distribution and used or distributed within the terms of the program's license, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the original software distribution.

9. License Must Not Restrict Other Software

The license must not place restrictions on other software that is distributed along with the licensed software. For example, the license must not insist that all other programs distributed on the same medium must be open-source software.

10. License Must Be Technology-Neutral

No provision of the license may be predicated on any individual technology or style of interface.

Open Standardsⁱⁱ

1. Availability: Open Standards are available for all to read and implement.
2. Maximize End-User Choice: Open Standards create a fair, competitive market for implementations of the standard. They do not lock the customer in to a particular vendor or group.
3. No Royalty: Open Standards are free for all to *implement*, with no royalty or fee. *Certification* of compliance by the standards organization may involve a fee.
4. No Discrimination: Open Standards and the organizations that administer them do not favor one implementor over another for any reason other than the technical standards compliance of a vendor's implementation. Certification organizations must provide a path for low and zero-cost implementations to be validated, but may also provide enhanced certification services.
5. Extension or Subset: Implementations of Open Standards may be extended, or offered in subset form. However, certification organizations may decline to certify subset

implementations, and may place requirements upon extensions (see *Predatory Practices*).

6. **Predatory Practices:** Open Standards may employ license terms that protect against subversion of the standard by “embrace and extend tactics”. The licenses attached to the standard may require the publication of reference information for extensions, and a license for all others to create, distribute, and sell software that is compatible with the extensions. An Open Standard may not otherwise prohibit extensions.

POLICY STATEMENT:

Open source software presents opportunities for agencies and departments to implement solutions without incurring the cost of acquisition and maintenance of licenses that are generally required for proprietary software solutions. Therefore, agencies and departments should consider the use of open source software solutions and open standards as part of normal procurement. This generally means that an investigation of potential open source software solutions should be conducted prior to issuing a bid for proprietary software solutions, and that the use of open standards should be included as part of a bid for proprietary software solutions.

Agencies and departments should also consider the use of open source languages, libraries, open development platforms and open protocols for the development of custom solutions.

PURPOSE/COMMENT:

Open-source software has had a long history of quality, reliability, robustness and flexibility starting even before the inception of the Internet. This methodology harnesses the collaborative potential of the Internet and relies on it as the backbone of a very sophisticated evolutionary development model based on the ideas of source code availability and distributed peer review. This has resulted in many OSS solutions which have been successfully implemented throughout the world, in both the public and private sectors.

Additionally, the use of open source solutions can provide an extremely favorable total cost of ownership scenario. Because open source has a drastically reduced upfront fee (often near zero in pure dollars), the initial investment is significantly less than with a commercial alternative. The resulting return on investment (ROI) can be improved dramatically and organizational value can be achieved at a lower total cost. A sound understanding of fixed costs (direct purchases, licensing, etc) and variable costs (support, test environment, maintenance, training, etc) needs to be established as technology alternatives are being evaluated. Each agency and department should carefully review their business requirements for technology solutions as they consider new projects.

Because participation in the ongoing development and improvement of OSS is the underlying basis for the promotion of OSS solutions, departments and agencies may actively participate in

development of OSS solutions that fall short of the project requirements for which the solution is used, but are not obligated to do so.

Requests for Proposals should require that software vendors clearly identify whether their solutions are fully functional using open standards and, if not, to specifically identify any proprietary or closed specification standards for which they do not support a fully functional open alternative. Departments should give preference to proprietary software solutions that implement open standards over proprietary solutions that do not and may include the degree to which a proprietary software solution utilizes open standards as part of the Request for Proposal evaluation criteria.

The utilization of open source software solutions should be made part of cost benefit analysis when determining which solution to adopt. In doing so, the analysis must fairly represent all costs of using any type (open or proprietary) of software solution, including the cost and availability of human resources to support, patch, maintain, license and upgrade the software.

When scheduling the implementation of any new software solution, agencies and departments need to be careful not to interfere with or diminish the effective use of software solutions that have already been adopted.

The technology utilized in the development of custom solutions should be carefully considered during the project planning phase of custom solution development. These solutions often last for many years and can become difficult to maintain as the technology around them is continually updated. It is, therefore, prudent to pursue a more modular approach to custom solution development whereby the solution itself can take advantage of open source development platforms to maximize platform independence while maintaining complete interoperability with proprietary solutions through the use of open protocols.

The acquisition of open source solutions, as with any proprietary software, is subject to the contracting requirements of Bulletin 3.5. A wide variety of licenses exist in both OSS and proprietary solutions and whether or not there is a financial expenditure, the license terms must be consistent with state policy.

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The adoption of most open source solutions does not involve payments for licenses, licenses but there are a number of different types of open source licenses that control how open source solutions may be used. Departments are advised to be aware of both the type of open source license and any requirements or restrictions that may be incorporated as part of the license. Since the licensing requirements can directly impact agency operations, consultation with the Attorney General's office prior to executing a license agreement for open source any given solutions may be advisable.

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NOTES:

A comprehensive catalog of open source software solutions can be found online at SourceForge.net, <http://sourceforge.net>, and through other sources.

i Open Source Initiative, <http://opensource.org/docs/osd>

ii Bruce Perens, <http://perens.com/OpenStandards/Definition.html>