State of Oregon

Open-Source Community of Practice

Acquisition and Use of Open-Source Software in Oregon State Government

Licensing and Procurement Analysis
Executive Summary

Summary

The report summarized here constitutes the Open-Source Community of Practice ("OS CoP") final analysis concerning critical license and procurement aspects of state agencies acquiring and using Open-Source Software in their environments (the "Report"). The full Report is comprised of the following discussion sections and appendices:

- Executive Summary
- Introduction
- Definitions
- OSS: A Growing Force in the Information Marketplace
- OSS: The Business Models and Licenses that Government Organizations Will Engage
- The Value and Risk of OSS Acquisition and Use in the Public Sector
- Current Acquisition and Use of OSS in State Government in Oregon
- Future Acquisition and Use of OSS in State Government in Oregon
- Conclusion

- Appendix A: List of Gartner Research Articles on Open-Source
- Appendix B: List of Diverse Articles on Open-Source
- Appendix C: List of Diverse Reference Books on Open-Source
- Appendix D: List of Internet Addresses for Diverse Open-Source Resources
- Appendix E: List of OSS Licenses Certified by the Open Source Initiative
- Appendix F: List of Selected FSF Responses to FAQ Concerning the GNU Licenses
- Appendix G: CIO Council Open-Source CoP OSS Inventory PowerPoint Presentation
- Appendix H: CIO Council Open-Source CoP Desk Top PC Evaluation Deliverables
- Appendix I: List of DOJ Model Public Contracting Rules Applicable to Software Acquisition
- Appendix J: List of DAS Public Contracting Rules Applicable to Software Acquisition
- Appendix K: IT Acquisition Policy and OSS Risk Management Analysis from the State of Massachusetts

Open-Source Software is a dynamic force in the information marketplace.

The State of Oregon understands and appreciates the dynamic force that Open-Source Software ("OSS") brings to bear in the information resource marketplace. OSS is increasingly becoming a critical component of information enterprise strategies and infrastructures in local, state, national and global venues. It is also becoming a moneymaking and cost savings proposition, making it essential for private and public

sector information technology organizations to understand the communities that develop OSS, and the entities that sell or otherwise distribute it.

Open-Source Software use is controlled through accompanying Software Licenses.

Unlike the typical situation with Closed-Source Software, the source code in OSS is freely available to users. However, like its proprietary counterpart, OSS use is governed by Software Licenses. Through these licenses, OSS authors control important aspects of Software use, including:

- Reproduction;
- Modification;
- Use; and
- Distribution

The Open Source Initiative ("OSI") is a principal certifying body for OSS Software Licenses. OSI has certified between 50 and 60 different OSS license types. OSS users must become familiar with these assorted licenses. License provisions can obligate users to act or refrain from acting in particular ways regarding the use and re-distribution of the underlying applications.

The value inherent in the use of OSS must be balanced with the risks attendant to that use.

OSS development and distribution provide viable information systems solutions. OSS acquisition and use can produce a number of valuable benefits, including:

- Cost Savings;
- Ease of acquisition;
- Quicker time to production; and
- Enhanced ability for internal support and maintenance.

In obtaining these OSS benefits, private and public users must remove or at least minimize the risks attendant to random acquisition and use of the Software. Risks include:

- OSS License compliance issues;
- Inefficient maintenance and support;
- Security issues;
- Inconsistent "buy" decisions;
- Maverick products that don't integrate and interoperate within the established architecture and enterprise;
- Failure to effect "Best Value" procurements;
- Failure to fully realize cost savings;
- Incomplete or non-existent technical, business and legal review; and

- Violation of applicable laws, regulations and policies.

The use of any Software creates risk. The challenge is to effectively manage the attendant risk in order to maximize the capture of benefits. The inherent value in OSS acquisition and use must be balanced with its attendant risks.

An enterprise Software acquisition and use policy is a "best practice" risk management tool.

Private and public sector experts agree that the principal Software risk management tool is an effective enterprise policy that drives simple and consistent understanding, practices and procedures concerning all key aspects of Software acquisition and use. Best practices prescribe the development and implementation of enterprise policies that provide consistent guidance and instruction concerning Software development, procurement, licensing, acceptable use, and distribution.

The State of Oregon is a fertile ground for OSS development, distribution and use.

Private and public sector organizations have staked out Oregon as a fertile ground for OSS development, use and distribution. Oregon state and local government entities are acquiring and using OSS in their daily operations. These organizations have acquired OSS through various means, including anonymous downloads from the Internet, specific Community-Source development projects, and the competitive procurement of bundled Software that includes OSS.

The State's acquisition of OSS is a procurement event, and government organizations must satisfy public purchasing requirements in connection with their acquisition of the OSS.

The State's acquisition and planned use of OSS is a procurement event. Even in a simple "no cost" download of OSS, a staff member must accept an accompanying Software License. The downloaded Software has value for the State, and the Software owner perceives value in the State-accepted license. The parties have each benefited and sacrificed in their mutual agreement to exchange valuable items. At a minimum, an "agreement" is formed.

The State has legal authority and the means to directly engage Software developers and suppliers in significant market research to generate enough information to make fully informed "buy" decisions concerning particular categories and types of Software. The laws, administrative rules and policies that implement this legal authority provide the

State with a wide array of effective sourcing methods for the Best Value Procurement of goods and services, including Software regardless of its source.

The State may acquire and use OSS as appropriate for specific project and enterprise business objectives; but should do so only in compliance with applicable laws, administrative rules and policies.

The State should develop an enterprise Software risk management policy.

Enterprise policies concerning governmental acquisition and use of OSS are logical measures to manage the risks attendant to Software use. State agencies have adopted policies establishing various processes that govern the introduction and use of Software in their environments. However, there are no specific policies in place regarding the acquisition, use and distribution of OSS by state agencies. Therefore, it is possible that current practices regarding state government acquisition, use and distribution of OSS may not be optimal in reaching all prevailing business, legal and procurement objectives.

The State should develop an enterprise policy for Software acquisition and use that lists the common risks attendant to the acquisition and use of Software, including OSS, and which identifies the resources and procedures that agencies should use to help develop and implement safeguards to manage these risks. The State of Massachusetts has promulgated an Information Technology Acquisition Policy that mandates Best Value acquisitions from among proprietary, Open-Source and Community-Source products. The state has fortified its policy through development of an Open-Source "legal toolkit" and an OSS risk management analysis from its legal counsel.[1]

Findings and Recommendations

State agencies have established review processes that govern the introduction and use of Software in their environments. These processes are primarily the result of the State's experience in acquiring and using Closed-source Software. The State acknowledges that Open-Source Software represents viable solutions to the business problems faced by state agencies. State agencies in Oregon are using Open-Source Software for diverse purposes. OSS has randomly crept into our environments through, among other means, free downloads from the Internet and via bundling in acquired proprietary and other commercial Software.

There are no consistent practices around acquisition and accountability for our OSS. Agencies may be following disparate courses of action, some unrelated to their established Software review processes, in acquiring and using their OSS. It is well understood that the acquisition and use of OSS solutions may come with attendant risks

[1] The Report includes copies of the Massachusetts IT Acquisition Policy and OSS Risk Management Analysis at Appendix K.

that must be identified and managed in each instance to optimize the utility of the acquired Software.

The State has benefited from the use of its acquired OSS, but may be unnecessarily exposed to risk attendant to this use. An enterprise Software acquisition policy that informs users and guides them in implementation of best practice risk management measures for all Software acquisition and use, including OSS, can mitigate the risk.

This Report closes with the following findings and recommendations that will hopefully contribute towards development and implementation of such a policy.

Findings

1. OSS development and distribution provide viable information systems solutions.

2. OSS is maturing in its diversity of offerings and technical functionality, and has a growing impact and increasingly noticeable effect on the Software industry.

3. Open-Source solutions increasingly compete with a broad range of Closed-Source products in all markets.

4. OSS is valuable Intellectual Property, and is increasingly a critical component of information enterprise strategies and infrastructures in local, state, national and global venues – including the State of Oregon.

5. A recent inventory of selected state agencies reveals thousands of instances of OSS installed and operating in the affected agency information systems. There is no consistent documentation tracking the licensing obligations attendant to the acquisition and use of this OSS.

6. The State has not established enterprise policies concerning the acquisition, distribution, use and licensing of OSS.

7. The acquisition of OSS is a procurement event.

8. The State does have established, written laws, administrative rules and policies guiding agency Best Value procurement activities; which apply to the acquisition, distribution, use and licensing of OSS.

9. The State is probably not consistently acquiring OSS through Best Value procurement activities.

10. The inherent value in OSS acquisition and use must be balanced against the attendant risks.

11. OSS must be consistently acquired and used in accordance with applicable law, regulation and established policy to mitigate risk.

12. Development and implementation of formal acquisition and use policies for OSS will maximize the utility of OSS use in all respects, including without limitation:

    - Functionality;
    - Integration;
    - Interoperability;
    - Management of acquisitions through a common efficient process;
    - Efficient management of acquired assets;
    - Ensuring license compliance; and
    - Ensuring compliance with governmental enterprise business objectives and public procurement law.

Recommendations

1. The State should acquire and use OSS as appropriate for specific project and enterprise business objectives.

2. The State should acquire and use Software, regardless of its source, only in compliance with applicable law, regulation and established policy that direct Total Cost of Ownership assessments and Best Value procurements.

3. The State should work towards development of a formal enterprise policy concerning acquisition, distribution, use and licensing of Software in general, including OSS.

4. Policy development should progress through three (3) phases:

    - Assessment,
    - Development, and
    - Implementation.

5. The assessment phase next steps should include:

    - Expansion of the current OSS Inventory to identify all Software applications operating in all agencies;
    - Documentation of all licensing obligations attendant to the inventoried Software; and
    - Identification of all current agency policies and practices concerning acquisition and use of Software in general.

6. The State should promulgate the subject policy through formal rulemaking.

7. Subject to the discretion of the DAS Enterprise Information Strategy and Policy Division, the current OS Community of Practice should evolve into a rulemaking advisory committee.