

Recommendations

1. State and local laws should remain neutral and objective regarding the procurement of open source software (OSS) by government agencies.
2. State laws should avoid special tax subsidies or tax breaks that favor OSS or open standards development.
3. Policymakers should take care not to confuse OSS and open standards with open government.

Procurement Policies and the Differences among Open Source Software, Open Standards, and Open Government

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Background

Most computer software is sold like any other commercial product and is protected by U.S. intellectual property laws (primarily copyright and patent protection). Such software products are sold under defined legal controls. Customers, without prior permission or a license agreement, cannot see or change the software program's basic source code.

It is also important to understand that the software world has evolved and is not divided into an "either/or" model anymore but rather an "and" model, where customers and governments want a "mixed" source environment so that proprietary software can run on top of OSS and vice-versa. Tech companies recognize this and are developing licensing agreements that can meet customer needs. Moreover, many in the OSS community have embraced a commercial business model because of this customer demand.

However, there are some people in the OSS community who embrace an ideological view of the ongoing debate over OSS and are critical of free-market capitalism – intellectual property (IP) and software patents in principle. They believe computer software should be community property freely available to everyone, regardless of who created it.

It is through a combination of those with a business interest and those with an ideology that pressure is put on governments to mandate one form of software or an "open standard" based on just OSS, while shutting out proprietary software.

High-tech companies that develop software and sell it under license, whether open or proprietary, have a strong economic incentive to stand behind their product, to create improved versions of it and to search continually for ways to protect it from attack by computer viruses and hackers. The government should not pick winners and losers in their procurement process. Rather, they should have a neutral policy aimed at the best technology solution for taxpayer dollars.

Definitions

First, a few definitions can explain the differences among open source software (OSS), proprietary or traditional software and open standards.

- OSS is software that is subject to a particular type of license, one of more

than 50 licenses approved by the “Open Software Initiative,” a group tasked with coordinating open source efforts. Many such licenses make broad intellectual property grants to licensees, allowing them to modify and further distribute the software, and to sublicense these rights at no charge. There are key differences, however, among OSS licenses with respect to modifying and/or redistributing the software’s “source code” as part of a *commercial* product. Today, some companies use OSS to capture associated hardware, services, and proprietary software revenue. The business model of such companies is based on generating revenue primarily through consulting, integration, maintenance, and/or training services (often involving the giving away or promotion of free or low-cost software as a loss leader for these revenue-generating services). OSS is not the same thing as open standards.

- Proprietary or traditional software is software that is subject to licenses that typically restrict the licensee’s right to copy, redistribute, or modify the software, and normally do not grant access to the software’s source code. These restrictions help to protect the developer’s investment in the software by preventing third parties from expropriating the software’s economic value without the developer’s authorization. The business model of companies deploying proprietary software is based on generating revenue primarily through the licensing of software products.
- An open standard is a publicly available technical “specification” (*i.e.*, a set of technical instructions and requirements) that is developed or approved and maintained by a consensus-based process in a voluntary, market-driven standards-setting organization that is open to all interested and qualified participants. What does that sentence mean? Are there other standards? Is the difference among the types of standards a meaningful one?

It is important to understand that OSS and open standards are different. OSS is a software that is licensed in a particular way and may be used to implement an open standard in a product or service. Whether a standard qualifies as “open” has nothing to do with the type of software used to implement that standard. In fact, open standards are neutral with regard to development models, welcoming all models and favoring none, and so it is equally possible for an open standard to be implemented in proprietary software or in OSS.

Cost Analysis

Many government agencies are initially attracted to OSS because it is often available for free or at a very low initial cost. But this is only the start. Software acquisition managers must also consider other factors that could add to the real cost of using OSS for government applications. Such an analysis needs to examine total cost of ownership over the lifetime of the software, and hardware for that matter.

OSS typically requires heavier customization, technical support and consultation with the distributor than proprietary software does. Proprietary software is designed to be used straight out of the box, with limited or no technical assistance. Public-sector managers must also weigh whether OSS is capable of doing the required work, is it the best tool available for the job at hand, how well it fits with existing computer systems, and what additional time and training is needed to teach agency personnel how to use it. Particular attention must be paid to the license used by the OSS under consideration because it may contain provisions that impose restrictions onerous to government.

While the initial acquisition cost may be low, the OSS’s capabilities and complexity, annual maintenance costs and the time needed to train staff may add

substantially to the total cost government agencies must pay to make an OSS system meet their particular needs.

One of the best ways to help ensure that government is spending taxpayers' money in the wisest possible manner is to insist that government procurement processes be based on treating all vendors equally using neutral and objective criteria. Criteria to be applied to all technology decisions should include best technology for the job at hand, total cost over the lifetime of the technology's use, security, reliability, accessibility, licensing restrictions and others directly connected to achieving the goal at the basis of the technology's use. Such a level playing field will open competition to all bidders big and small, new and old, thereby helping government make certain that the best value for the dollar is achieved.

Policy Analysis

Not only do proponents of OSS mandates see standard proprietary software as “bad” because customers must pay for its use, which results in profits for private companies, but they also claim that only OSS can deliver interoperability—or enabling systems to talk to one another—because it is based on open standards. The simplistic logic is that only open standards can ensure interoperability and because OSS implements open standards, OSS is interoperable. But there are four important reasons why this reasoning is false:

- Open standards are only one way to help achieve interoperability. License agreements, software design and industry collaboration are other ways to achieve interoperability between products and systems.
- OSS may or may not achieve interoperability – any type of software code can be written to work effectively with another piece of software. There is nothing inherent in OSS code, business model or licensing model that guarantees or even fosters interoperability. In fact, OSS business models may promote vendor lock even more profoundly than other business models.
- OSS may or may not implement open standards. In fact, because some OSS developers choose to distribute their software programs under licenses that are inconsistent with longstanding and well-accepted license terms, these developers may refuse to implement such open standards in their products, thereby *impairing* such software's potential interoperability.
- Because OSS source code can be modified by anyone, a product that initially conforms to open standards and is interoperable may be altered by a user in a manner that breaks interoperability.

One instance of where such logic is trotted out is when governments are implored to impose a single document format on communications within government and between government and its constituents, all under the well-intentioned but misleading guise of “open and transparent government.” Several questions should arise when a government mandates a certain type of document format for storing data. First, what happens when a new and better document format is created, whether open source or proprietary? Digital formats are always changing through continuous technological evolution. The government would essentially be betting that any document format they chose would be the best system on an infinite time horizon. That notion is shortsighted – and very costly.

The second question is how could government regulators keep up with the quickly changing technology environment? As discussed earlier, customers are demanding more “mixed” source environments for their information technology (IT) solutions. Regulators are notoriously poor at keeping up with the myriad of

improvements in technology. How would this be any different?

Third, who actually benefits from such mandated selections? Do citizens benefit when they are deprived of their freedom to choose? No, because they need to obtain unfamiliar software so they can exercise their right to communicate with their elected representatives. Do small and medium sized businesses benefit? No, many small companies in each state in the Union are based on a healthy IT ecosystem that revolves around choice and competition. Do major business and employers benefit? No, because they will need to revamp their IT systems so they can report to government, resulting in even more overhead in difficult economic times. So then who does benefit? The only beneficiaries are the big IT companies whose products are failing in the marketplace and have replaced innovating with lobbying, attempting to use government to gain an unfair advantage.

Lastly, what happens to innovation? Many technology companies are based upon the time-honored tradition of having incentives for their innovations and inventions through IP. This creates jobs, funds further research and results in constant improvement of products. If the market is artificially skewed to favor a different approach, there will be little impetus for private individuals to invest time and money to produce better products. This would harm both consumers and the government.

The development of software code is like any other innovative human activity. It is the result of the mental labor of the people working for the companies that created it. Software development, like any writing, is a form of intellectual property. The natural ownership rights of those who create it should be respected in law and in the marketplace.

As noted above, open source companies often choose to earn money by offering free software and then charging for heavy technical assistance and consultation. They are certainly within their rights to do so. But people and businesses that retain control of what they have made are equally acting within their rights, and they should be allowed to benefit commercially from their efforts, without facing discrimination.

In some states, exploring options to mandate a certain type of open source document format is justified as an attempt to make government more open. But the reality is that open source proponents are asking government to discriminate against businesses that developed software based on research and investment, and that rely on intellectual property rights. This form of “openness” excludes competitors rather than includes them. And that is silly when government should be doing everything it can to encourage competition to reduce the costs to taxpayers, especially at times like now.

Policymakers may think that OSS mandates have certain attractive ideological qualities and money saving aspects for taxpayers, but they should be aware of the practical problems involved. OSS requires more labor and technical assistance than proprietary software, and the extra time and cost should be taken into account when making procurement decisions. Moreover, mandates greatly limit the availability of essential tools for government employees. It destroys incentives for private companies to reinvest money into further research and development that improves products and services.

OSS and Open Standards versus Open Government

Largely because of good government efforts, and due to the spotlight the 2008 political campaigns shone on transparency efforts on the federal government to become more open, there is a tendency to confuse open government with open

standards and OSS.

Open government proponents, like Washington Policy Center, advocate for government data to be published in easy-to-understand ways so that the general public can play a bigger role in monitoring government activity. With the general public's Internet proficiency greater now than ever before, using technology to disseminate this type of information is ideal.

Proponents of OSS and open standards are piggybacking on the open government argument to argue that everything in government, even computer operating and storage systems must be open and transparent – including mandating standards for documents and records archiving. They are trying to confuse policymakers by saying that because OSS offers people the ability to see a program's source code, government and citizens can examine this code to verify it performs well and contains no “hidden features.” But there is a big difference between accountability through transparency and government favoring a particular business model to the exclusion of all others.

Instead of preselecting winners or favoring one technology or company over another, an open government procurement process treats all vendors equally and applies the same objective and neutral criteria to them. That empowers government to provide citizens with the best services available. Scores of state and national governments, international bodies, and the United States Office of Management and Budget have recognized that procurement processes built on objective criteria applied neutrally and equally to all vendors enable governments to achieve the best results.

Policymakers should avoid adopting procurement rules that mandate the use of OSS to the exclusion of all other options. Such a policy does not result in the best use of taxpayer money because it needlessly ties the hands of public managers who are responsible for running their agencies efficiently and within budget.

Policymakers should also be aware that arbitrarily equating open standards with open government, and then following a policy course based on OSS, reduces the ability of software companies to improve existing products and to develop new ones. The reality is that OSS and open standards have little to do with true open government efforts.

Recommendations

1) State and local laws should remain neutral regarding the procurement of software by government agencies. Policymakers should not restrict or predetermine the technical support needs of government agencies by arbitrarily setting procurement policy so that only the purchase or leasing of specific technologies can be considered.

2) State laws should avoid special tax subsidies or tax breaks for open source software. Policymakers should recognize that there is a role, and a market, for both open source software and proprietary software and refrain from implementing tax or regulatory policies that grant special treatment to one over the other.

3) Policymakers should take care not to confuse OSS and open standards with open government. OSS is a licensing model and open standards is a consensus building process around technical specifications. Neither have anything to do with open government nor do they guarantee that any open government will result from use of OSS or open standards. Open government is a way of ensuring the public has unfettered access to government data, which will help citizens keep their government accountable.

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