

Open Source Software (OSS) As a Possible Default Exploitation Route for Government Funded Software

Comments from Intellect

Intellect represents around 1000 companies in the information technology, telecommunications and electronics industries based in the UK. Formed in 2002 through the merger of the Computer Services and Software Association (CSSA) and the Federation of the Electronics Industry (FEI), Intellect members contribute around 10% of UK GDP. Further information about Intellect can be found at www.intellectuk.org and a full list of members at http://www.intellectuk.org/publications/corporate_literature/factcard.pdf.

Intellect thanks the Department of Trade and Industry and the e-Envoy's Office for the opportunity to comment on the interim conclusions on a draft policy for the use of OSS as a possible default exploitation route for Government funded software.

Background to use of OSS

One of the main purposes for acquiring software under an OSS licence is to provide a user unrestricted access to source code so that it can be modified and improved without requiring further consent from any IP rightholder. Many software developers who are involved with developing this type of software do it for personal interest and not for commercial gain. Others are committed to promoting innovation, while others – particularly corporate sponsored contributors – are motivated by a desire to promote interoperability and open computing environments by sharing code within the information technology “ecosystem”.

Types of OSS Licence

There are numerous types of OSS licence but they basically fall into two categories:

Permissive Licences:

These types of licences, such as the Berkeley Software Distribution Licence (BSD), allow users to copy, re-distribute and modify the software at no charge, whether in source code or machine-readable object code, and do not seek to restrict these rights. Users are free to distribute modified versions of the software under whatever terms they wish - including as part of a commercial product subject to standard commercial licensing terms. So software that is the subject of such OSS licences can be used in conjunction with commercial software in a solution, leaving the commercial software to be governed by the licence imposed by the developer and the open source software to be governed by the original licence terms. Under these terms commercial developers do not seek to make economic gain from the original Government funded research, merely from any subsequent changes or innovations developed by them.

Restrictive Licences:

These licences, such as the GNU General Public Licence (GNU GPL), grant free rights to users to use, copy or modify without payment or restriction. They prohibit users from distributing the software on any terms other than the original licence, and

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impose this requirement on any program derived from or based in whole or part on the software. In the context of an OSS program that is then developed commercially, unlike the permissive, these licences impose their terms on the commercial part of the software as well as the OSS element.

This actually limits the freedom of the developers whose programs utilise, are derived from, or in some cases even link to or interlink with, such licensed code by replacing their terms with the OSS restrictive licence terms.

This body recognises that there may be applications where open source software is deemed to offer the best technical option. Where the OSS terms are of the permissive type there is seldom a commercial issue for the developer – the outcome is much the same as a proprietary third party program's being made a part of the commercial offering. However if the OSS software is supplied under a restrictive licence such as the GNU GPL then it inhibits what can actually be developed and commercially exploited by the developer. This body does not support the unfettered use of these licences. The reasons are discussed below.

Industry Perspective

Commercial companies that develop software, be it as their main core business, or as part of a product, do so in order to supply the software on a repeating basis and thereby to generate licensing revenues that allow them to make a profit on their investment, and offer better value in future projects by exploiting learning from earlier projects. Ownership of the intellectual property rights in their own creations is an essential prerequisite for this type of business model. The software element of a product can provide a commercial advantage but the normal practice is that executable software and not the source code is provided.

The source code often contains proprietary intellectual property that gives the developer its advantage over other suppliers of similar technology. It is not in a business's interest to give a competitor access to the information that makes it a market leader. Granting such access would allow the competitor to emulate the original product without bearing the same level of investment cost incurred by the original developer. Developers are therefore reluctant to make source code public where there is an active market for the product to which the code relates.

In addition to the source code issues, the restrictive licence profoundly affects the IP ownership position of the developer and further impacts its ability to make a return on its investment. Its ability to generate further revenues either by reselling the original development or a modification of it is severely impacted by the "free" licence terms. (The developer may make no charge for the software, whatever its value to licensees – it is entitled to make a charge for distribution if it wishes but the rights position is such that any third party can undertake distribution if it so elects, without payment to the developer.)

If a piece of Government funded software were to be subject to a restrictive licence, such as the GNU GPL, commercial companies would often not see a benefit in entering into such an agreement because:

- 1) There is a limited amount of money that could be made from the original development because of the limited opportunity for further revenue
- 2) They may not want to make public and available for free use any of their IPR that is employed in the development

The third section of the policy is probably the section that causes the most concern. It appears to state that, no matter what type of exploitation route has been agreed

with the Government at the outset of the project, if it does not comply with the default position (i.e. an OSS licence), then after two years, it will automatically be required to revert to an OSS licence consistent with the default position required in section 2. If the project were based on a licence other than the approved OSS licences, such as a commercial licence, then this would appear to require a complete change in the original contract terms and conditions. This would be extremely difficult to implement retrospectively and probably raises serious legal questions such as whether it is possible for one party to unilaterally seek to change the contract terms. It would also place a question mark over the ownership of the intellectual property rights contained in a project and leave contracts open to legal challenge and consequent uncertainty. Such a proposal would inevitably act as a deterrent to commercial involvement in Government sponsored R&D software projects because they would have such a limited opportunity to exploit any commercial gain from any privately owned IPR and because of the uncertainty about the long term ownership of the IPR and any subsequent developments from it.

Government Perspective

It is fully appreciated that the Government may see a benefit in being able to use software it has funded in as many cases as possible, either by using open source software or by funding software under an OSS licence that could be used elsewhere.

There are points of caution however. When the Government decides to develop software using a restrictive licensing base, such as the GNU GPL, they should be aware that this would prevent it from deriving commercial gain from any subsequent derivative programs and prevent or severely limit the opportunities to work with commercial companies on such projects. Also the Government entity should ensure that it engages suppliers who are able to provide essential maintenance and support for such software. Although initial acquisition costs may be non-existent, there will ultimately be costs associated with service, support and maintenance, which need to be considered. Each program would have to be reviewed on a case-by-case basis to deem its suitability on the basis of quality and total value for money basis.

Requiring the use of restrictive licences could also cause problems for the Government and may lead to

- 1) Lack of adequate competition in the bid process. Would be developers, faced with a choice between committing resources (i) to bid for and perform an OSS restrictive licence solution with the disadvantages referred to above and (ii) a more regular commercial opportunity (including an opportunity to work for a Government body of a different country) without the OSS requirements would be commercially inclined to choose the latter. This reduces breadth of choice and the quality of suppliers open to Government procurement.
- 2) Software that would not include leading edge developments. Because of the impact on source code disclosure no developer would be willing to use anything more than customary techniques in developing the software otherwise it would risk disclosing its commercial secrets.
- 3) Very basic software which would only provide minimally useful solutions – for the same reason anything beyond customary and known solutions would not be constructed
- 4) Confidentiality issues. There may in some cases be a conflict between the Government's desire to maintain confidentiality and the requirement to disclose the software laid down by a restrictive licence, to the extent that the source code itself discloses attributes about the Government body that are regarded as confidential.

Cost of ownership

From the Government's perspective a further issue is the total cost of a deployment. Apart from the fact that in the case of a restrictive licence, the developer has only one opportunity to derive real revenue from its work, and will price accordingly (which compared with a resalable solution, will offer inferior value for money in many cases). The cost of the procurement should be viewed not only in the up front costs of the development but also the cost across the lifetime of the use of the program in maintenance and support. So any procurement should be made in the light of a full total cost of ownership analysis.

Conclusion

A policy needs to encourage companies to be involved in R&D, avoiding overly restrictive terms and conditions which may render participation in Government funded R&D programs commercially unviable.

Consideration should be given to the structure that the MoD and other Government departments have in place for the commercial exploitation of software developed in defence and other types of contract. These are terms and conditions that are already agreed and allow the MoD, for example, to make money out of their investment under a commercial exploitation agreement. However it does not necessarily allow source code to be provided to other parties particularly if there are security issues.

For the reasons discussed the setting of a default position for use of restrictive licences such as the GPL, brings with it some commercial disadvantages that may in some cases outweigh the benefits. The recommendations in the policy statement of Douglas Alexander MP in July 2002 stated the Government should consider both open source and proprietary solutions for software procurement and that the decision should be taken on a value for money basis, an approach which this body supports. Setting a default for involvement with Government funded R&D software projects that favours one model of software development (open source) over another (commercial) is inconsistent with this reasonable policy objective. This body also suggests that a full understanding of the different types of licence and their commercial impact should be part of any procurement decisions in furtherance of the value for money test embodied in the policy.

The Government should give serious consideration to the impact that adoption of a default position which includes restrictive licences such as the GNU GPL, would have on its ability to choose from a wide variety of partners, including commercial software developers, and in seeking innovation, quality and overall value for money from its investments in R&D software projects. The Government should not seek to limit its choice by ruling out the use of commercial licensing options and should at a minimum delete the use of GNU GPL from the default position outlined in section 2 of the draft policy.

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