

Microsoft Comments Regarding the Cabinet Office Revised Definition of "Open Standards"

5th October 2011

Executive Summary:

The revised definition for the term "open standard" provided to members of Intellect by the Cabinet Office does not remedy the significant flaw that was identified by numerous submissions made in connection with the review of the Procurement Policy Note 3/11. We continue to believe that the continued requirement in the revised definition that patents essential for implementing the standard be licensed on a royalty free basis winds up excluding from consideration a great number of useful standards that governments all over the world currently use. The revised definition is actually more problematic than the original one contained in PPN 3/11, because it now requires not just that essential patents be licensed on a royalty free basis, but that they be licensed "restriction free." While our research suggests that there are a few standards which might meet a requirement that essential patent claims held by participants to the standards development process be licensed without royalty, the "restriction free" requirement would eliminate all standards, including even those published by the W3C or OASIS Technical Committees that have selected a royalty free IPR mode. While we applaud the government's twin objectives of improving interoperability and lowering costs of its ICT systems, we do not believe that the revised definition furthers either of those objectives. On the contrary, we believe that the revised definition would result in fewer options for government procurement officers and could result in procurement decisions that reduce interoperability and increase costs.

Discussion:

- 1. The revised definition would preclude the use of practically all standards that governments (and private sector, including citizens) currently use because no standards are "made irrevocably available without restriction on a royalty free basis."**

Many stakeholders involved in the Cabinet Office consultation on PPN 3/11 noted the requirement in the open standard definition that the standard "have intellectual property made irrevocably available on a royalty free basis" would prevent public authorities in the UK from specifying standards or technical specifications which are useful and widely used in the market place. We previously noted that this requirement suffers from two distinct flaws.

First, it failed to take into account the way patent policies at standard setting organizations operate and the fact that those policies at most only bind members of the SSO. While it might be possible to say that all patent holders who participated in the development of the standard at the SSO had agreed to make their patents available on a royalty free basis, there is no guarantee that a patent holder not bound by the SSO's policies will not seek royalties (thus making the standard fail the definition in PPN 3/11). Take the W3C standard XML as an example. The W3C patent policy licensing requirements only apply to

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participants who belong to the working group that created the XML specification, and not to other W3C members, nor third parties who do not belong to W3C. As a result, a company named i4i who was not a participant in the development of the XML standard, has asserted its patents against XML implementers and sought injunctive relief and payment of royalties. Just as the definition in PPN 3/11 created a requirement related to patent licensing that could not be met in the real world, the revised definition requires that “any patents essential for implementing the standard” must be made freely available. No matter what the patent policy at a standards body, it can never reach non-participants or provide any assurance with regard to “any patents.”

Aside from the issue of patents held by non-participants to the creation of a standard, PPN 3/11 and the revised definition also do not reflect the real world practice by participants to the creation of a standard. As we noted in our comments to PPN 3/11, it is extremely rare for SSOs to require that participants license essential patent claims on a royalty free basis. Aside from the W3C and certain OASIS Technical Committees, the vast majority of bodies that create ICT standards operate under patent policies that allow participants to license their essential patent claims on Fair Reasonable and Non Discriminatory terms (FRAND), including a royalty. Accordingly, standards created by the IETF, IEEE, ISO/IEC, CEN/CENELEC and ETSI to name just a few, would all be disqualified from consideration by the open standard definition contained in PPN 3/11 as well as the revised definition.

But the revised definition not only carries forward these flaws highlighted in the PPN 3/11 definition, it actually amplifies the problem, by requiring that in addition to being licensed royalty free that they also be licensed “restriction free.” Even the W3C patent policy permits licensing restrictions to be imposed on implementers (see <http://www.w3.org/Consortium/Patent-Policy-20040205/>):

W3C Royalty-Free license shall mean a non-assignable, non-sublicensable license [...] [and]

- may be limited to implementations of the Recommendation, and to what is required by the Recommendation
- may be conditioned on a grant of a reciprocal RF license
- may be suspended with respect to any licensee when licensor is sued by licensee [...]

With the addition of the “without restriction” language in the revised definition, it is unclear how even W3C standards can meet the open standards requirement. The revised definition would also exclude all OASIS standards, including the Open Document Format standard. As we are not aware of any standards body that requires essential claims be licensed “without restriction”, we believe that the revised definition would preclude procurement officers from referencing any standards.

We believe that PPN 3/11 should be revised to read: “Patent rights required to implement the standard are available under fair reasonable and non-discriminatory terms (with or without a royalty at the option of patent holder).”

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2. **The revised definition is based on an incorrect assumption that current licensing practices for patents necessary to implement standards somehow discriminates or disadvantages developers of Free and Open Source Software.**

We believe that all ICT products, regardless of development model, should be on a level playing field in the context of government procurement. In the end, the government benefits from vibrant competition between open source and traditional commercially licensed products. We do not believe there is any credible data to support the claim that patent royalties in the standards context are an impediment to open source developments who seek to sell their products to the government. We believe that the revised definition is based at least in part on the incorrect belief that removal of all patent royalties in the standards context would somehow level the playing field for open source developers.

Proponents of Free and Open Source Software (FOSS) have long made unsupported claims that patents on standards disadvantage FOSS developers and as a result the rules governing licensing of such patents (which are historically based on so-called “fair reasonable and nondiscriminatory” or FRAND terms) need to be modified. The primary claim made is that per unit royalties imposed by some patent holders are inconsistent with the tenets of FOSS licensing and thus preclude FOSS developers from implementing the standard. FOSS advocates maintain that FOSS is an important competitor to “proprietary” software and that policy-makers should therefore intervene to level the playing field for FOSS, by effectively eliminating patent protection in the standards context. We believe that these claims are wrong, and there are numerous instances where distributors of FOSS products have agreed to pay patent royalties. Distributors of FOSS products have created this claim of incompatibility in an attempt to obtain innovative technology for no cost.

There are hundreds of FOSS projects in the marketplace implementing hundreds if not thousands of standards, so we have to ask “is this a real problem?” and “are there concrete examples where a company was unable (due to FOSS licensing constraints) to implement a standard in a FOSS product because it was unable to comply with the royalty requirement related to essential claims?” Even vendors of GPL licensed products can take FRAND licenses— as evidenced by Canonical’s decision to take a patent license from MPEG-LA for the H.264/AVC codec for its Linux-based Ubuntu operating system. One of the most widely publicized patent licenses related to an open source product, the license that Red Hat took from Firestar to settle infringement claims, also included the payment of a royalty of an undisclosed amount by Red Hat to Firestar. Proponents of this theory do not identify examples to support their claim and we would suggest that before the Cabinet Office implements a policy to “level the playing field for FOSS” that it first gather the empirical evidence that demonstrates that royalties on standards result in a non-level playing field. Given the number of large vendors who have a significant portfolio of FOSS offerings, we think asking them how they deal with the issue of patent royalties on standards and whether they can provide specific instances where they were unable to implement a standard due to conflicts between FOSS licensing terms and a royalty requirement would be a good starting point.

We do not believe that such empirical evidence exists to support a royalty free requirement as a means of leveling the playing field for FOSS and so we do not believe that this requirement should be included

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in the open standard definition incorporated in PPN 3/11. But in order to preserve that issue, should evidence subsequently be developed, the Cabinet Office may wish to include language to the effect that:

"Patent rights required to implement the standard are available under fair reasonable and non discriminatory terms (with or without a royalty at the option of patent holder), in a manner that allows implementation of the standard in both proprietary and open source software and solutions."

3. The revised definition would not advance the government's underlying interoperability objectives, nor would it advance the government's underlying cost saving objectives.

While standards are clearly an important part of a government interoperability program, it is important to remember that standards alone do not guarantee interoperability and that they are merely one piece of the puzzle towards fostering better interoperability. Several recent research projects have pointed out at both a theoretical and practical levels why this is the case:

"Why Standards Are Not Enough to Guarantee End-to-End Interoperability" Grace Lewis et al. (available at <http://www.computer.org/portal/web/csdl/doi/10.1109/ICCBSS.2008.25>)

"Lost in Translation: Interoperability Issues for Open Standards" Jay Kesan and Rajiv Shah (available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1201708)

"Effective PDF Testing Strategy" Steve Kang (available at <http://www.qualitylogic.com/tuneup/uploads/docfiles/Effective-PDF-Testing-Strategy.pdf>)

These projects have highlighted the importance of clear drafting, robust interoperability testing of implementations, widespread market acceptance and a clear process for revising and updating the standard as key drivers for interoperability. The Procurement Policy Note (PPN) in its present form tends to greatly underemphasize these important criteria, and instead focus significant attention on the patent licensing terms, a factor not identified as important in any research on the relationship between standards and interoperability. As a result, we do not believe that the PPN in its earlier or revised form would advance the government's interoperability objectives. We believe that any decision by the government to give preference to one or more standards in the name of fostering interoperability should be grounded on solid empirical evidence that the standard as implemented in the marketplace will in fact foster better interoperability.

Governments around the world have been actively debating the extent to which standards which can be implemented with payment of a royalty impact the interoperability generally and the overall costs of IT procurement. A recent, comprehensive and unbiased view was recently published by the Dutch Court of Audit which found no evidence to support for the claim that mandating royalty free standards in the procurement context lead to such outcomes. As one commentator noted in his discussion of the Court of Audit report:

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“Open standards for digital technology are often associated or even confused with open source software, but remain two completely different technology domains. However, they share the assumption of various frequently quoted benefits, such as better quality, cost saving, and more vendor independence. The Court of Audit did not find any evidence for the general validity of these potential advantages.” (“Open Source Computing and Public Sector Policy” Victor DePous (available at <http://www.depous.nl/DEPOUS-OPEN-SOURCE-COMPUTING-AND-PUBLIC-SECTOR-POLICY.pdf>)

A summary of the Court of Audit report can be found at http://www.courtofaudit.com/english/News/Audits/Introductions/2011/03/Open_standards_and_open_source_software_in_central_government. Based on evidence such as the Dutch Court of Audit it is therefore difficult to understand how the new definition will help advance the government’s goal to reduce the cost of IT and inadvertently may well increase the cost to government.

4. The revised definition is not limited by inclusion of the term “software interoperability standards” as a scope limitation.

The revised definition changes “ICT” to standards for “software interoperability, data and document standards”. Although this language might seem at first glance to limit the scope of the policy to some small subset of ICT standards, it does not in practice do this. This language encompasses a wide range of standards which are available on a FRAND basis only, including standards which governments are using and referencing today. For example many ETSI or IEEE standards set interoperability at layers of the OSI/ISO stack which are implemented in software. Such standards, which are by definition for software interoperability, would then be excluded based on the draft policy note. Data and documents can be used and exchanged in a variety of manners which require cooperation at different layers of the stack, involving not only software aspects but also hardware aspects. For example with the development of the cloud and mobile computing, streaming of data through the network is becoming more frequent. The MPEG standard, widely implemented in open source software, is one example. Collaborative editing of documents stored in the cloud is another example. As a consequence of this interaction over several layers, many standards which were once perceived as relevant only at the lower layers of the stack are becoming critical for the performance of data or interoperability standards.

As a consequence the term “data and documents standards” will also apply to widely used standards which are only available on a FRAND basis.

ANNEX A:

The revised definition of open standards reads:

“For UK Government ICT procurement specifications, open standards for software interoperability, data and document standards are those which:

- result from and are maintained through a transparent decision-making process that is independent from any individual supplier and that is accessible to all interested parties;
- are adopted by a specification or standardisation organisation, or a forum or consortium such as W3C;
- are published, thoroughly documented and publicly available at zero or low cost;
- have any patents essential for implementing the standard made irrevocably available without restriction on a royalty free basis and under terms and conditions that allow implementation of the standard in both proprietary and open source software; and
- as a whole have been implemented and shared under different development approaches and on a number of platforms from more than one supplier, demonstrating interoperability and platform independence.

(N.B. The specification/standardisation must be compliant with Regulation 9 of the Public Contracts Regulations 2006. This regulation makes it clear that technical specifications/standards cannot simply be national standards but must also include/recognise European standards).”