Open Standards Consultation – Your Views

Response by the Free Software Foundation Europe

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About the Free Software Foundation Europe

Free Software Foundation Europe [http://fsfe.org] is a non-profit organisation dedicated to furthering Free Software, and works to promote freedom in emerging digital society.

As an independent non-governmental organisation, the Free Software Foundation Europe works to create general understanding and support for Free Software and Open Standards in politics, business, law and society at large.

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Chapter 1: Criteria for open standards

1. How does this definition of open standard compare to your view of what makes a standard 'open'?

What exactly is a "government body"?

FSFE supports the content of the proposed definition, but some details in wording still have to be clarified, in order to ensure that the policy can be implemented effectively:

> *1. Government bodies must consider open standards for software interoperability, data and document formats and in procurement specifications should require solutions that comply with open standards, unless there are clear, documented business reasons why this is inappropriate.*

First, it is not clear what is meant by a "government body". We fear that in the end just a small subset of public bodies will be covered by this term, and consequently by the policy.

Software and in particular document formats are subject to strong network effects, and one government body using proprietary formats might cause problems for many others using formats based on Open Standards.If an Open Standards policy is to be effective, it needs to address the largest possible set of organisations. We therefore propose to use "Public bodies or private bodies exercising public functions" instead of "government bodies".

Furthermore, it is not clear from the available policy documents which public bodies will be within the scope of the policy. According to information provided by Cabinet Office representative Linda Humphries in a meeting on Open Standards and Leveling the Playing Field on May 29, 2012, the policy would only apply to central government bodies, not local governments or other government bodies. She also remarked that the G-Cloud Strategy would not be covered by the policy.

This limited reach would severely constrain the effectiveness of the policy, and heavily curtail the benefits it will provide. Local authorities, the education and health sectors, and a plethora of other public bodies will continue to be locked into overpriced, proprietary solutions, and lack guidance and support from central government to build vendor-independent IT systems. Small and medium IT companies will continue to be excluded from most of the public-sector market, as public-sector IT spending will remain heavily concentrated on a small number of large systems integrators.

These problems will be even more severe where the G-Cloud is concerned. If this

central service is built on anything else than Open Standards, this will compound the current set of problems (concentrated procurement, vendor lock-in, amplified by network effects, leading to a lack of competition) for the entire UK public sector, and make it even more difficult for public bodies to pursue IT strategies which are orientated towards long-term sustainability and value for money. Given the network effects described above, the policy will only be effective if a broad set of government bodies are compelled to move to Open Standards.

Procurement teams will also require training in dealing with legacy software solutions, and breaking free from vendor lock-in. Without a proactive effort by the government, widespread vendor lock-in will all but guarantee the policy's failure.

The proposed "comply or explain" approach is largely suitable. However, we strongly recommend that compliance should be determined, and explanations provided, *before* the procurement actually proceeds. Once tenders are published and contracts are signed, corrections and alternative approaches are infinitely harder to implement.

Therefore, we propose the following wording:

> *1. [Public bodies or private bodies exercising public functions] must [use] open standards for software interoperability, data and document formats and in procurement specifications should require solutions that comply with open standards, unless there are clear, documented business reasons why this is inappropriate.*

It should however be made very clear that the fact that an organisation is currently subject to vendor lock-in on account of its use of proprietary formats is not a "clear, documented business reason" to refuse adopting Open Standards. UKG should provide education and assistance for overcoming the obstacles of current vendor lock-in to public bodies and private bodies exercising public functions.

This provides a strong impulse for change in line with the intent of the policy, while still preserving an option for those public bodies which are for some reason unable (rather than merely unwilling) to move to Open Standards.

Licensing of patents in standards

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> *2. For the purpose of UK Government software interoperability, data and document formats, the definition of open standards is those standards*

which fulfill the following criteria: [...]

FSFE sees problems in the following part of the definition:

> *owners of patents essential to implementation have agreed to license these on a royalty free and non-discriminatory basis for implementing the standard and using or interfacing with other implementations which have adopted that same standard. Alternatively, patents may be covered by a non-discriminatory promise of non-assertion.*

Royalty-free (and restriction-free) licensing of patents contained in standards is the norm in IT, and more so in software standardisation. In software, so-called "FRAND" ("Fair, Reasonable And Non-Discriminatory) licensing of patents necessary to implementing a standard puts the patent holder in control of an entire product category, and is therefore inimical to competition and innovation in the market.

In particular, FRAND licensing is incompatible with the most widely used Free Software licenses, such as the GNU General Public License. Even in a hypothetical approach where patent royalty rates would be set to zero, the patent holder (usually a large corporation) would still be able to refuse a patent license to a Free Software project, or impose conditions which effectively prevent the project from implementing the standard. Even though recourse through the legal system might be available in theory, in practice the Free Software developers (often small companies) will rarely have the required resources to confront a multinational corporation in court.

It is therefore essential that UKG insists that patents included in standards for software are made available to any interested party without licensing fees or restrictions.

2. What will the Government be inhibited from doing if this definition of open standards is adopted for software interoperability, data and document formats across central government?

If the Government adopts a definition of Open Standards along the lines of what we propose in response to question 1, this would greatly increase the freedom of action which public bodies and private bodies exercising public functions - enjoy.

The only restriction they would suffer is that they would no longer be at liberty to lock themselves into proprietary formats owned by a single vendor; this can only be considered a good thing. In cases where there is currently no Open Standard available, or where it is not feasible to use, the policy provides sufficient alternative options ("comply or explain", which should be a step taken before a public body releases a call for tender.)

If, however, application of the policy is restricted to central government alone,

this will lead to severe interoperability problems with the rest of the UK's public sector, which remains mired in vendor lock-in. We recommend that UKG should take a bolder stance, apply the policy as widely as possible, and take steps to enable all public sector organisations to implement it.

3. For businesses attempting to break into the government IT market, would this policy make things easier or more difficult – does it help to level the playing field?

Adopting the proposed policy including FSFE's amendments (see Question 1) would be a significant step towards leveling the playing field. Today, 60% of revenue from central government contracts goes to only 10 or so systems integrators. It is not acceptable for the government to pick winners in this fashion.

The policy, if implemented in full, will be an important step towards opening the UK's public sector IT market to competition. A comprehensive Open Standards policy would greatly lower the bar for UK businesses, in particular smaller ones, to compete for government contracts. In addition, Open Standards naturally circumvent vendor lock-in and therefore guarantee the freedom of choice for future government procurement and a vivid competition inside the government IT market.

5. What effect would this policy have on improving value for money in the provision of government services?

The policy would substantially open up competition for government business as Open Standards can be implemented by the widest possible range of software suppliers. For the buyers, this means lower prices, and better quality. The absence of a vendor lock-in would allow government bodies to switch suppliers comparatively easily.

By making it easy to move from one supplier to another, Open Standards guarantee maximum choice for customers This, in turn, leads to improved performance as vendors compete to keep government customers loyal.

In addition, using Open Standards will boost innovation, as new products can be based on existing ones. Innovation in software development is, and has always been, largely incremental, building on improvements made by others. Open Standards make these incremental innovations a lot easier, accelerating the rate of innovation, which will in turn lead to better products on the market.

The technologies that make up the Internet are best examples of an infrastructure which is built upon non-restrictive and royalty-free standards, thus enabling Free Software as well as proprietary programs to compete in the most vibrant and innovative environment.

6. Would this policy support innovation, competition and choice in delivery of government services?

The openness of standards for software, document formats and data is critical in this respect. Since Open Standards can be implemented without restrictions, the proposed policy would greatly contribute to supporting innovation, competition and choice in the delivery of government services. Standards provide a platform on top of which businesses can compete, and Open Standards mean that there is no limit to the number and approaches which businesses can take to satisfy government needs.

If public data, for example, is published or delivered in formats based on Open Standards, this makes it possible for anyone to build innovative software to interact with this data. This will enable citizens to take the initiative and develop applications to suit their needs and those of their communities.

As explained above, the policy would be key to introducing real competition into the market for public sector IT service contracts in the UK. Currently, most of the UK's public bodies are tied to a small number of large vendors, many of which are headquartered outside the UK.

If the policy is implemented in full, across all public bodies and private bodies exercising public functions, together with suitable training and education for procurement staff, it will become possible for a large number of UK businesses (both existing and new) to compete for public sector IT contracts, as barriers to market entry will decrease significantly.

7. In what way do software copyright licences and standards patent licences interact to support or prevent interoperability?

As explained above, FRAND licensing of patents in standards for software, data and document formats is incompatible with the most widely used Free Software licenses. At the same time, many of the main competitors to dominant programs in the market are Free Software. Deciding which patent licensing policies to accept in standards therefore turns into a choice between a free market and one dominated by an oligopoly.

To ensure software interoperability, copyright and patent licenses may only be included in an Open Standard under a non-restriction and non-assertion license. Otherwise this standard will exclude Free Software from using it and is not in any sense interoperable. (F)RAND licensing thereby prevents interoperability. Royalty-free licenses on the other hand are free to use, also for Free Software and therefore strongly support interoperability. Please see Question 8 for a more detailed analysis.

8. How could adopting (Fair) Reasonable and Non Discriminatory ((F)RAND) standards deliver a level playing field for open source and proprietary software solution providers?

(F)RAND standards cannot deliver a level playing field for participants in the software market because most (F)RAND standards require a royalty fee to be paid for each copy of a program that is distributed. Paying royalties of even a single penny per copy or less to implement a standard might appear "fair" to someone not familiar with the problem.

In addition, and maybe even more important, per-copy royalties are fundamentally incompatible with the GNU GPL, which is the most widely used Free Software license [See http://osrc.blackducksoftware.com/data/licenses/ for a statistic of "Top 20 Most Commonly Used Licenses in Open Source Projects"] and covers key programs such as the Linux kernel and much of the GNU operating system. Moreover, such royalties are fundamentally incompatible with most of the Free Software licenses out there. According to the quantity of usage of different licenses, more than 80% of Free Software projects are distributed under licenses that are incompatible with patent royalty-bearing regimes. In reality, (F)RAND is unfair, unreasonable, and highly discriminatory against all Free Software.

The only solution that enables full competition is "zero-royalty" or "royalty-free" licensing for patents included in standards for software, data, and document formats. Because "zero-royalty" does not exclude Free Software from using the standard nor does it exclude proprietary (or even heavily patented) implementations. Indeed, "Zero-royalty" means that if certain technologies are mandated by a standard, they must be available to everybody without requiring running royalties. Meanwhile the implementations can be distributed under any given license and include any technology, provided that the standard is respected.

The exponential growth of the Internet and the World Wide Web, which are built entirely on the basis of restriction-free standards, clearly demonstrate the potential that the policy can unleash if UKG sticks to a definition of Open Standards that makes them available for implementation to all interested parties without restrictions.

9. Does selecting open standards which are compatible with a free or open source software licence exclude certain suppliers or products?

Open Standards do not exclude anyone. On the contrary, since they can be implemented by anyone, they open up the market to all players.

Since by definition, there are no restrictions on implementing an Open Standard, developers of proprietary software have the option of including support for the relevant interfaces or file formats in their programs, at no cost beyond that of the implementation itself. Claims that requiring Open Standards would exclude one group of suppliers are generally without merit.

10. Does a promise of non-assertion of a patent when used in open source software alleviate concerns relating to patents and royalty charging?

Businesses serving government need a firm legal basis to build upon. While a promise not to assert a patent is generally a friendly gesture by the patent holder, it is no replacement for a clear policy requirement for Open Standards, which can be implemented without royalty payments or restrictions. Promises of non-assertion may eventually be rescinded (e.g. when the patents it covers are sold to another company).

12. In terms of standards for software interoperability, data and document formats, is there a need for the Government to engage with or provide funding for specific committees/bodies?

Regarding UKG's approach of setting up an Open Standards Board to steer the implementation of the policy, we consider it essential that discussions of the board are conducted in a transparent fashion. In order to ensure participation is not limited to representatives of the current large suppliers, there needs to be the opportunity for representatives of smaller companies to participate in the board and exercise equal influence. Board discussions need to be structured in a way that minimises the time burden especially on representatives of small companies. UKG should consider setting up a mechanism to encourage and support the participation of smaller companies in the board.

Chapter 2: Open standards mandation

1. What criteria should the Government consider when deciding whether it is appropriate to mandate particular standards?

Where it mandates a particular standard for software, data, or document formats, government must make sure that the standard is an Open Standard -- it must carry no restrictions on implementation, and must not require the implementer to pay patent royalties.

4. Could mandation of competing open standards for the same function deliver interoperable software and information at reduced cost?

Competition takes place on top of standards, not between standards. Competition on top of a standard removes barriers, increases interoperability and customer choice. Competition between standards reduces interoperability, fragments the market, and leads to vendor lock-in.

For example, the frequency used in alternating-current (AC) electricity networks -- 50 Hz -- is largely arbitrary. It might be equally possible to use a frequency of 40 Hz, or 70 Hz, instead. What is important is that everyone connecting to the network -- electricity generators as well as users -- use the same frequency.

If government decides to mandate standards, it would be best by recommending an initial set of Open Standards. These standards must strictly conform to the definition and should come with a large number of implementations, in order to provide a basis on which the policy can be successfully implemented. Other Open Standards can be added to this list at a later date.

5. Could mandation of open standards promote anti-competitive behaviour in public procurement?

Mandating Open Standards could not conceivably lead to anticompetitive behaviour in the software market. Quite to the contrary, they are the best way to open up competition in the software market. Since Open Standards carry no restrictions on implementation, smaller implementers (all else being equal) are in a better position to challenge incumbents. Conversely, standards with restrictions on their implementation have long been shown to foster anticompetitive behaviour (e.g. Microsoft's proprietary .doc format).

7. How should the Government best deal with the issue of change relating to legacy systems or incompatible updates to existing open standards?

Legacy systems and file formats are a cost factor in any case. Even with proprietary software and formats, new versions of a program frequently are

unable to properly process older versions of what is notionally the same file format. Extracting data and converting files into new formats is a significant task in any IT migration. An organisation that adopts Open Standards will only have to do this once in order to move its files to a format that is fully and publicly documented. Thereafter, it is easy to use (and if necessary build) tools to convert files from one open format to another as needed.

However, UKG should be clear about the fact that breaking free from vendor lock-in will require an initial effort. Experience from numerous other countries in Europe and around the world shows that policies such as the one proposed can only be implemented if the people who are supposed to implement them -- procurement and IT teams in public bodies and private organisations exercising public functions -- receive training and assistance.

The costs of these efforts (which are really costs that the user organisation incurred at the time it chose a proprietary IT solution or document format) will be quickly offset by savings realised by buyers in a more competitive IT service market.

9. How should the Government strike a balance between nurturing innovation and conforming to standards?

This is the wrong question to ask. There is no balance to be struck. Standards, and Open Standards in particular, provide a basis for innovation because innovation happens on top of standards, not within standards. The great innovation space that is the Internet is based on a set of Open Standards that have either remained unchanged for decades, or have been updated slowly and carefully. It is exactly this "conservative" approach to standards that has turned the Internet into the basis of a huge number of innovations.

UK government would therefore best encourage innovation by relying on well-established Open Standards, and pushing for them to be used across the entire UK public sector. This will remove the barriers to innovation presented by proprietary formats and interfaces, and allow market participants to innovate and build tomorrow's solutions.

11. Are there any are other policy options which would meet the objective more effectively?

A strong mandate for Open Standards, together with an overhaul of procurement practices, is the single best policy option on the table to increase the government's value for money, and promote innovation in the software sector.

To guarantee these benefits, there should be a mechanism to give recognition to those public bodies which follow the policy. At the same time, public bodies which fail to follow the policy need to be identified, and actively encouraged to adhere to the policy in future. For example, there could be a peer-review procedure for some of the body's tenders. At the same time, UKG needs to ensure that bidders who were excluded due to a body's failure to adhere to the policy have an easy, low-cost route to challenging the tenders concerned.

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Chapter 3: International alignment

Is the proposed UK policy compatible with European policies, directives and regulations (existing or planned) such as the European Interoperability Framework version 2.0 and the reform proposal for European Standardisation?

The proposed policy is not only fully compatible with European policies, regulations and directives. It faithfully transposes what the European Interoperability Framework has to say with regard to Open Standards into actionable national policy. The relevant parts of the EIF in turn build on the Ministerial Declarations made in Malmo and Granada, highlighting the need for all EU member states to produce compatible national interoperability frameworks by 2013.

The policy is also in line with the Digital Agenda for Europe, in particular the actions concerning the European Interoperability Framework (24, 25, 26, 27), the ICT procurement guidelines (Action 23), the Horizontal guidelines (22) and the European Standardisation Reform (21).

Will the open standards policy be beneficial or detrimental for innovation and competition in the UK and Europe?

The Open Standards policy, if implemented effectively across the UK's public sector and including private organisations exercising public functions, would be highly beneficial for innovation and competition in the IT markets of the UK and Europe.

Applied in this fashion, the policy would open up the UK market to full competition, lowering prices and increasing performance across the board.

Without a broad application of the policy, however, we fear that the policy will have little impact in practice. The UK's public bodies would then continue to suffer from vendor lock-in, and spending funds provided by UK taxpayers on overpriced proprietary IT solutions rather than more essential public services. The IT service market in the UK would remain highly concentrated, with more than 60% of public-sector contracts going to only 10 or so large suppliers and systems integrators. Finally, the Cabinet Office itself, having put such commendable efforts behind developing this policy, would lose quite a bit of credibility in the eyes of the IT industry, which may harm its negotiating position in future.

Are there any are other policy options which would meet the objectives described in this consultation paper more effectively?

The proposed policy seems largely suitable, if the modifications proposed in our response are implemented. Based on experience gained in other countries (e.g.

Sweden, Italy, Spain, Germany, the Netherlands, and others), it will be essential for the policy's success that the government invests in training those who will have to implement the policy around the UK public sector, and in making it possible for them to receive advice on an ongoing basis.

There should be a mechanism to give recognition to those public bodies which follow the policy. At the same time, public bodies which fail to follow the policy need to be identified, and actively encouraged to adhere to the policy in future. For example, there could be a peer-review procedure for some of the body's tenders. At the same time, UKG needs to ensure that bidders who were excluded due to a body's failure to adhere to the policy have an easy, low-cost route to challenging the tenders concerned.

Sweden's approach of public-sector framework contracts for the procurement of Free Software has proved successful, and should be adopted in the UK. This approach has greatly helped to broaden IT choice for Sweden's public-sector buyers, and has provided them with an easy way to exercise that choice in practice.

Free Software use in the UK lags far behind the rest of Europe. The UK now is in the happy position to avail itself of the benefits of Free Software, while being able to learn from the experience of others. For the benefit of its citizens and businesses, the UK government should seize this opportunity.