Two types of openness in information technology standards and competition policy

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1. Introduction

This article avoids using the term "open standard" because it is often used in confusing ways, and sometimes even deliberately used to create more confusion. Sometimes the confusion comes from a policy interest to keep a standard proprietary while maintaining the positive image of openness. At other times the confusion comes from the mere difficulty to identify the relevant features that define an open standard. For example European Interoperability framework, version 2, explains "openness continuum" in the following blurry way:[2]

> "Specifications, software and software development methods that promote collaboration and the results of which can freely be accessed, reused and shared are considered open and lie at one end of the spectrum while non-documented, proprietary specifications, proprietary software and the reluctance or resistance to reuse solutions, i.e. the "not invented here" syndrome, lie at the other end. The spectrum of approaches that lies between these two extremes can be called the openness continuum."

This short article takes a more detailed and practical approach on openness. First, the article discusses how the exclusive use trade secrets and patents affect the openness of an information technology standard.[3] A standard can be said to be *openly documented* if the documentation is publicly available to everyone and there are no trade secrets. A standard can be said to be *openly implemented* if there are no problematic patent licensing requirements or restrictions on implementations.

Second, this article discusses how competition policy could help in keeping standards openly documented and openly implemented even when someone claims trade secret and or patent licensing requirements. The discussion here relies largely on the EU Court of First Instance's Microsoft decision and its aftermath. Accordingly, EU competition policy seems to be more eager to keep a standard openly documented than openly implemented.

Finally the article ponders the policy implications of the current competition policy framework towards open standards. Open documentation is a necessary and rather clear starting point for more competition. Open implementation is however a more nuanced issue. If a standard is openly

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[2] European Interoperability Framework for European Public Services (EIF), Version 2.0, p. 11.

[3] Copyright is not considered as a major problem, although the regulation of technological protection measures or DRM can cause problems in certain cases. See e.g. Mikko Välimäki and Ville Oksanen: "DRM Interoperability and Intellectual Property Policy in Europe", European Intellectual Property Review 11/2006, pp. 562-568.

implemented – with no problematic patent licensing – there may be less innovation and less competition within the standard. This can be a problem if the standard and its implementation are technically complex.

2. Open documentation

The first step in opening a standard is to have it openly documented.

Sometimes a standard is well documented but the documentation is available only under strict confidentiality obligations. An example is DVD playback algorithm, where a central body licenses out the documentation for third party implementations. At other times a standard may completely lack documentation. An example is various Microsoft's *de facto* standards, which were not thought to be licensable in the first place.

In both cases, the standard should not be called open. Legally speaking, trade secrets are usually used as the tool to keep the documentation confidential and closed. In practice, the effect of trade secret is limited by the fact that it typically requires a contract (non-disclosure agreements) to be effective. At the time of the Internet, it may be difficult to hold a technical document with high demand a top-secret for an extended period.

Copyright has been also sometimes called for to keep a standard confidential, although the copyright doctrine seems to have settled against the copyrightability of standards.[4] In the case of software, the copyright doctrine explicitly allows the open documentation of a proprietary standard, whose documentation is not available.[5]

3. Open implementation

The second step in opening a standard is to have it openly implemented. This is the more difficult, and also the more controversial step.

The open implementation of a standard is nowadays often compromised by patent licensing requirements. Examples are too many to list, though some areas seem to be more prone to patent problems. In the recent years especially telecommunications has been subject to numerous high-profile patent disputes.[6]

Legally speaking, patent law doctrine is solid with patented standards.[7] The recent critique and reform proposals on patents in standards have focused on particular issues such as disclosure obligations and the misuse of such

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[4] Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, article 1, states: "Ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected by copyright under this Directive."
[5] Directive 91/250/EEC, article 4, "Decompilation".
[6] Among others, Nokia and Quallcomm have been litigants in many cases.
[7] During the preparation of a directive on computer-implemented inventions that ultimately failed in 2005, it became obvious that a proposed exception for interoperability would not have succeeded.

patents.[8] Thus, the patent law doctrine itself will not help those seeking for an open implementation.

But what exactly is an open implementation? Open source advocates maintain that an open standard should either have no patents, or any possible patents should be publicly pledged for everyone with zero royalties. This stems from the fact that most open source licenses are incompatible with patent royalties; in other words a patented standard for which a company asks royalties cannot for example implemented in Linux.[9]

However, it is also often said that "can be implemented in Linux" is not synonymous for an openly implemented standard. After all, the very word "patent" derives from latin "patere" meaning "open" or "accessible". Every patent is, in theory, publicly available to everyone, free-of-charge. Only the price must be negotiated separately. Hence, the question on openly implemented standard could be reduced to what is a reasonable royalty (and other patent licensing terms) for an implementation.[10]

4. Competition policy

EU competition policy seems to be more eager to keep a standard openly documented than openly implemented. At least since the 2004 Microsoft decision, the EU Commission has treated trade secrets differently from patents in its competition law interventions. For example a discussion paper from 2005 states on the obligation license (standardized) interoperability information as follows:[11]

> "242. Even if such information may be considered a trade secret it may not be appropriate to apply to such refusals to supply information the same high standards for intervention as those described in the previous subsection [discussing other intellectual property rights]."

During the follow-up litigation in the Court of First Instance, the Commission explained the main difference as follows: trade secrets are typically based on contracts, while intellectual property is defined in legislation that is supposed to promote innovation.[12] Patents are thus different because they are granted only on inventions that embody innovations, and competition policy is after all promoting innovation as well.

A separate but relevant question is, whether all patents are equally innovative. The Commission seems to treat all patents alike, as it seems to treat all technologies and standards alike. Are there other ways to call for

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[8] See e.g. Dan L. Burk and Mark Lemley: The Patent Crisis and How the Courts Can Solve It. The University of Chicago Press, 2009.
[9] Linux is licensed with GNU General Public License. Its term 7 prohibits further distribution in combination with patent royalties.
[10] See e.g. Mikko Välimäki: A flexible approach to RAND licensing, European Competition Law Review 12/2008, pp. 686-691.
[11] DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses, p. 68. Brussels, December 2005.
[12] Case T-201/04, Microsoft v. Commission, Court of First Instance, 17.9.2007: "280… the value of the 'secret' concerned lies not in the fact that it involves innovation but in the fact that it belongs to a dominant undertaking."

innovation within a standard? From practical perspective, one could also require the standard and its implementation to be technically complex or challenging and therefore fertile ground for follow-on innovation. Only then one should avoid competition law intervention.

The Court of First Instance did not comment in much detail on how to determine reasonable royalties on patents in standards. The subsequent settlement indicates that the reasonableness of licensing terms should be analyzed case-by-case. Without dictating any of the terms, the Court of First Instance decision bent Microsoft to develop and disclose tens of different licensing options. One of them was a royalty-free option for open source implementations.[13]

5. Concluding remarks

To summarize, calling a standard open often implies more questions than it gives answers. This short article has tried to shed light on two further questions: what does it mean for a standard to be openly documented and openly implemented?

For open documentation, the answer is rather straightforward. If the documentation is not publicly available to everyone, it is hard to speak about an open standard. A secret or undocumented standard means obviously less competition. Thus, the current EU competition policy rightly supports open documentation even if intellectual property rights – trade secrets or copyrights – are claimed upon the standard in question. If needed, the documentation can be drawn out with reverse engineering.

For open implementation, a straightforward answer does not exist. Standards and patents remain an issue for debate. At one extreme, open source advocates have been calling for the destruction of patents in one way or the other. However, a truly "patent-free" standard is not always as open to competition as a standard with reasonably licensed patents. If patents are always freely licensed or their use otherwise compromised, there may be less companies entering the markets and innovating within the standard.[14] It was suggested that this would hold especially when the standard and its implementation are technically complex.[15]

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[13] See e.g. Mikko Välimäki: A flexible approach to RAND licensing, note 8 above.
[14] Arguing for example that there is always Google or some foundation supporting open source developers is not enough. Healthy competition usually requires a number of companies who can use different business models.
[15] Compare to James Bessen: Open Source Software: Free Provision of Complex Public Goods, in Jürgen Bitzer and Philipp J. H. Schröder, eds., The Economics of Open Source Software Development, Elsevier B. V. (2006). Bessen argues that just because of complexity open source (without patent licensing) makes sense. In fact, the opposite may be true. See e.g. Michael Widenius: The importance of the license model of MySQL or Can MySQL be killed? Post on monty-says.blogspot.com. 14.10.2009. Widenius is the author of the most popular open source database MySQL and claims that without supporting licensing revenue no company or venture capitalist will invest in complex open source application development.