Comments On The W3C Patent Policy Framework Draft

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Abstract

This document expresses some concerns regarding the W3C Patent Policy Framework, W3C Working Draft 16 August 2001, `http://www.w3.org/TR/2001/WD-patent-policy-20010816/`.

Our concerns range from general problems due to the proliferation of patents in Web-related areas, over a few editorial issues with the Draft, to design defects in the protocol outlined in the Draft.

(This version of this memo closely matches the version submitted to W3C, but some typographical errors were fixed.)

Contents

1 The Effect Of Patents

In this document, unless explicitly noted, the term *patent* refers to a right granted by government to an inventor which gives the inventor a monopoly (usually limited in time) in the exploitation of a specific invention, in exchange

for public disclosure of said invention. In some jurisdictions, this definition is broader than what is commonly called a patent (see section 2.1 for details).

1.1 Patents, The Internet, and Web Technology

There is an ongoing debate whether patent-based monopolies, originally implemented in law to encourage research, stiffle innovation in the Internet and Web technology sector. We have reservations towards patents in general, but the currently existing combination of patentable trivialities, poor patent review, low patent description quality, huge delays, and the wide neglect of patent research during protocol design and software development makes it hard to believe that the benefits of full disclure outweigh the detrimental effect of monopolies on markets.

However, patents are an existing factor, and the World Wide Web Consortium has to take them into account, even though patents are a burden for open standards. A Patent Policy reflecting the current problems is therefore necessary. However, W3C should be careful in oder not to destroy their authority on Web standards by adopting a policy which results in open, but unimplementable to many standards.

Since other submitted comments on the Draft already give strong arguments against the shift in favor of patent holders, in the following, we mainly address issues with the proposal itself, under the hypothesis that the reasonable, non-discriminatory licensing terms model is acceptable to some degree and is implemented according to the Draft, although the author strongly believes that the political and practical implications do not lie in the interests of W3C and its Members.

1.2 Delayed Enforcement Of Patents

Unlike trademarks, which are weakened if the owner neglects to enforce them, patents can be enforced very selectively in most jurisdictions. In the form of *Delayed Enforcement of Patents* (DEP), this property of patents poses the main threat to an infrastructure of open standards.

Because of the likelyhoid of *Unintended Patent Infringement* (UPI), the DEP threat is very real. Unlike copyright infringement and breach of non-disclosure agreements, patent infringement cannot be avoided by clean-room protocol design or software development. In some areas of technology, unintended infringement is very likely since a large number of trivial patents have been granted, or patents covering the nature of a problem and not its solution.[1]

Note that it is not in the interest of a patent holder (especially the holder is not engaged in W3C activities, for example, because it is patent-collecting company, and not a software developing one) to alert a Working Group of UPI situations, especially if the Recommendation being drafted can be expected to be widely implemented. For the patent holder, DEP is probably more profitable, i. e. to wait for the deployment to occur and then threaten to sue implementors because of UPI.

[1] Some observers and even large-scale patent holders suggest that part of the recent proliferation in software patents is due to the UPI risk, and that patent collections are used as a *force de frappe*, a long list of potential countering lawsuits.

In some jurisdictions, *distributed DEP* is possible, that is DEP and finally lawsuits against resellers and end users, and not protocol designers or software developers. In this situation, software developers in turn face a very significant number of lawsuits from their customers, forcing them to accept virtually any patent license terms.[2]

Although the risks of DEP cannot be avoided entirely, one goal of a W3C Patent Policy has to be to reduce the risk of DEP by its Members. Therefore, the Draft has to be carefully checked if there are any loopholes, substantial or not.

2 Editorial Issues

This section deals with mere editorial issues. Editorial issues can be corrected by wording changes which do not alter meaning.

2.1 Improper Terminology

The Draft uses the abbreviation *RAND* for *reasonable, non-discriminatory* as in *RAND licensing terms*. This seems to be unfortunate because *RAND* is already a trademark. (The RAND Corporation of America will certainly be annoyed by defamatory comments on "RAND licensing terms".)

The Draft focuses on patents. However, in some jurisdictions there are additional methods to protect inventions, comparable to patents in scope and effect, but differing in some aspects (for example, duration, or conflict resolution). Usually, these protection methods are not included in the term *patent*.[3] It is not clear whether these methods are covered by the Draft or not. (Copyright can have an effect on implementations as well, but due to the nature of copyright, a Working Group can notice such issues very early and always avoid detrimental effects on implementors.)

3 Design Defects

This section deals with defects in the protocol defined in the Draft. In this section, we assume that the reasonable, non-discriminatory licensing terms licensing model is implemented—however, this should not be taken as an expression in favor of reasonable, non-discriminatory licensing terms. The discussion below is purely academic.

3.1 The DEP Risk Is Underestimated

In section 1 of the Draft, patent issues are presented mainly from a Member's point of view, and its Working Group activities:

> The root of the challenge posed by patents in any standards arena is that participants in a standards body will be unwilling and unable to

[2] DEP has already occurred, but was usually attributed to forgotten patents, but as of this writing, one case of planned DEP is on trial. Mechanisms similar to distributed DEP have already been used successfully against alleged trademark infringement.

[3] For example, in Germany, these additional methods are called *Geschmacksmuster* and *Gebrauchsmuster*, in contrast to *Patente*.

> work collaboratively if, at the end of the process, the jointly-developed standard can only be implemented by meeting licensing terms that are unduly burdensome, unknown at the beginning or even the end of the design process, or considered unreasonable.

This seems to neglect that the W3C aims at standards for the entire World Wide Web, and not only its members, and at standars for actual implementation. The DEP threat should be mentioned explicitely. In the worst case, not only the work of some Working Group members was fruitless, or that of the entire Working Group, no, in the worst case, the Recommendation is implemented widely before the patent infringement claims are raised. It is extremly complicated and time-consuming to replace already deployed client-side technology, and distributed DEP can force a software developer to accept very unfavorable licensing terms because fighting against the patent would be even more cost-intensive.

3.2 The Definition of *Essential Claims*

There seems to be a defect in the defintion of an *Essential Claim*:

> "Essential Claims" shall mean all claims in any patent or patent application with an effective filing date within one year and one day after the publication of the first Public Working Draft, in any jurisdiction in the world [...]

The time limitation is confusing and unnecessary and complicates the analysis of the patent disclosure protocol. It is plain wrong if the first Public Working Draft cannot be considered prior art for the patent or patent application in question (for example, because the parts infringing the patent were added later).

Even if the Public Working Draft was published at a date at which it could be considered prior art (given that the period of one year is sufficient for that), it is not clear if the existance of the Public Working Draft deters DEP or is a sufficient incentive to fight in court, and in the case of distributive DEP, it is unlikely that this is relevant at all.

A claim is automatically non-essential if a workaround exists:

> Existence of a non-infringing alternative shall be judged based on the state-of-the-art at the time the specification becomes a Recommendation.

With the exception of a patented transmission format, it is hard to believe that the possibility of a non-infringing implementation cannot be shown in all cases, in particular since there is no requirement for practicalness.

In addition, it should be up to the Working Group to decide if the patent workarounds are acceptable, and even if non-patented workarounds do exist, the obvious approach is probably patented. As a result, the patent disclosure requirements are not as effective against UPI as they could be.

Finally, note that "the state-of-the-art at the time the specification becomes a Recommendation" might not be known at the time at which patent disclosures are required.

In addition, the exceptions stated later seem to be too wide to be effective to prevent DEP:

- enabling technologies that may be necessary to make or use any product or portion thereof that complies with the Recommendation but are not themselves expressly set forth in the Recommendation (e. g., semiconductor manufacturing technology, compiler technology, object-oriented technology, basic operating system technology, and the like)[...]
- the implementation of technology developed elsewhere and merely incorporated by reference in the body of the Recommendation.

There is no reason to exclude related patents which might affect the implementability of the Recommendation from the disclosure requirements, given that it is not unlikely that a Recommendation will use certain concepts or technology which are already deployed or in the process of being deployed. In addition, some companies claim that "basic operating system technology" includes fairly elaborated concepts such as Web browsers, so such phrases should be used only with greatest care.

A Working Group might consider such patents to be insignificant for the actual Recommendation, but their disclosure should be mandated nevertheless, to warn implementors and thus reducie the UPI risk.

3.3 Patent Licenses and Derived Recommendations

The reasonable, non-discriminatory licensing terms and royalty-free licensing terms models both permit the following restriction:

> [...]may be limited to implementations of the Recommendation, and to what is required by the Recommendation[...]

This does not take revisions of the Recommendation and related or derived Recommendations into account, resulting in DEP threats to the work of future Working Groups.

3.4 Denial Of Service Attack

Patent holders can submit all their patents and patent applications and state that they might contain Essential Claims. If a large number of Essential Claims have to be considered, the protocol defined in the Draft fails miserably, especially since most of the people dealing with the patent disclosures do not have any expertise in dealing with consequences of patent law in multiple jurisdictions.

As a side effect, a list of potentially essential patents published along with drafts looses much of its value when it is so long that considerable patent reviewing expertise is required to tell the good ones from the bad ones.

3.5 Good Faith Is Not Always Enough

The *Good Faith Disclosure Standards* does not reflect the large number of patents held by some companies engaging in W3C activities. In these cases, lost or forgotten patents are not entirely unlikely. In particular, the following provision seems to be counterproductive:

> No extraordinary effort is required for patent disclosure requests[...]

Patent portfolio reasearch at some W3C Members *is* an extraordinary effort, and a Member can and will miss something essential if thorough research is not done (if this is done deliberately or not does not matter).

3.6 What is reasonable? Non-discriminatory?

It is not clear what "reasonable, non-discriminatory licensing terms" mean in practice. In addition, a patent license in the reasonable, non-discriminatory licensing terms spirit might change suddenly, creating a DEP potential. Similar concers apply to the royalty-free licensing terms requirements. The DEP prevention therefore lies entirely in the disclosure of the patent (makeing the U part in UPI less likely), and many ways to extort money from companies which have already deployed W3C Recommendation implementations remain. Certainly, a requirement for irrevocable license terms seems to be desirable.[4]

3.7 Contractual Implementability

It is not clear if the W3C Patent Policy Framework can be implemented in contracts with their Members. Given the definitions of reasonable, non-discriminatory licensing terms and royalty-free licensing terms, there is probably a huge potential of loopholes. On the other hand, some Members might not find the conditions favorable because they feel that the new reasonable, non-discriminatory licensing terms are either too permissive or too restrictive.

3.8 Patent Research

Acitve patent research does not seem to be covered by this policy. It is a tool to prevent UPI and, therefore, DEP to some degree, but it is costly even if it is limited to a few countries.

3.9 What About Free Software?

Clearly, patents pose a strong threat on Free Software. One of the freedoms commonly associated with Free Software is the freedom to distribute modified versions, and such a freedom is severly limited by a requirement for royalties which can araise from the use of patented technology.

The W3C should ask itself if it really wants to take steps to ban the use of Free Software in major areas of the future World Wide Web (and more generally, the Internet). Free Software has proven to be a viable development model for providing the core technology infastructure of the Internet. Even in areas directly related to W3C activities, the importance of Free Softwareshould not be underestimated, at least when looking at the server side.

Free Software always faces the threats of patents, but the tendency of the Draft towards reasonable, non-discriminatory licensing terms puts an unnecessary burden on Free Software. It might not be possible to put reasonable, non-discriminatory licensing terms off the agenda of the Patent Policy Working Group, but as a countermeasure, it should examine if there is enough interest in a third licensing mode, with the following characteristics:

[4] Adam Warner's submission contains a detailed analysis of the DEP risks associated with the current reasonable, non-discriminatory licensing terms procedures outlined in the Draft.

- The *Free Software license terms* shall enable Free Software[5] to implement the Recommendation (even partially and in different context). No royalties shall be required for the use or distribution of source code or object code. Note that these terms are broader than those of the current royalty-free licensing terms requirements.
- Patent licenses issued under these terms for Free Software shall be irrevocable.
- For proprietary software, either royalty-free licensing terms or reasonable, non-discriminatory licensing terms can apply.

If the *force de frappe* theory is correct, most patent holders will not oppose such general licenses for Free Software because it is unlikely that they have to face threats from this direction, and from a patent policy point of view, there is no necessity for guaranteed mutual annihilation after the first strike.

4 Summary

In our view, the Patent Policy Working Group has to take the following steps before the Draft can be actually implemented:

- Correct all the critical defects mentioned above.
- In particular, the definition Essential Claims has to be fixed, and a irrevocable component has to be added to the license models, in order to reduce the UPI risks and the DEP threat.
- Consider dropping the questionable reasonable, non-discriminatory licensing terms model, based on the strong arguments and objections from the community at large.
- Implement a third licensing mode which favors Free Software if the reasonable, non-discriminatory licensing terms model cannot be dropped.

[5]We do not give a definition of the term *Free Software* in this context. Some work is probably required to obtain an accetable definition, and there are a few open questions (for example, regarding the status of proprietary derivatives of Free Software). For an example of a more philosophical definition, refer to `http://www.gnu.org/philosophy/free-sw.html`.