



May 6, 2015
United States Patent and Trademark Office
U.S. Department of Commerce

RE: USPTO RFC on Enhancing Patent Quality, Docket No. PTO-P-2014-0043

To Whom It May Concern:

Mozilla submits these comments in response to the February 2015 Request for Comments on Enhancing Patent Quality.

The proposals presented in this RFC target a focused set of procedural reforms, some of which would help improve the efficiency of patent prosecution processes. But the title and narrative as presented by the PTO are much broader in ambition and scope. To make much needed progress in enhancing the quality of the patent system – particularly in the unique and critical domain of software – major changes are needed to patent process, substance, and scope. This filing offers a roadmap for such changes. The PTO is not solely able to implement all of the recommendations, but bearing the full context in mind is important for addressing enhancing of patent quality at all levels of government. Additionally, the PTO has a statutory duty to advise on IP policy, and should embrace that role to support broader reforms needed to achieve patent's fundamental goals.

On behalf of Mozilla, we thank you for the opportunity to comment on this request for information. Please do not hesitate to contact us with questions or for additional input.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Chris Riley".

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Comments on the United States Patent and Trademark Office Request for Comment on Enhancing Patent Quality

Prepared by Mozilla and Submitted on May 6, 2015

I. Introduction

Mozilla is a global community of people working together since 1998 to build a better Internet. As a non-profit organization, we are dedicated to promoting openness, innovation, and opportunity online. Mozilla and its contributors make technologies for users and developers, including the Firefox web browser and Firefox OS phone. As a core principle, we believe that the Internet, as the most significant social and technological development of our time, is a precious public resource that must be improved and protected.

Two of Mozilla's core principles¹ speak to patent law and policy. Principle #6 says that the effectiveness of the Internet as a public resource depends on interoperability, innovation and decentralized participation worldwide. Patent law and regulation, done properly, foster innovation and interoperability; but if designed or implemented incorrectly, impede these goals more than promote them. And principle #5 says that individuals must have the ability to shape the Internet and their own experiences on it. Where users are unable to use the technologies of their choice because of patent restrictions, or where their uses of technologies are restricted as being in violation of overbroad patents, user control and empowerment suffers.

We submit these comments to offer our views on how to tune the patent system to enhance quality in the context where we have expertise: software. We contend that the challenge of improving software patent quality is far broader than the specific proposals teed up in this RFC, and in the spirit of USPTO's invitation to submit commentary not

¹ <https://www.mozilla.org/en-US/about/manifesto/>

solely on the specific questions raised but also on “any other issues that the public believes to be important to patent quality,”² we share our full observations in this filing.

Software patent reform is sorely needed. Public attention is beginning to be drawn to the issue, including through a segment by John Oliver,³ who has in recent months raised the profile of many once-esoteric technology policy issues, such as net neutrality. We encourage the PTO to take a mantle of public leadership and support meaningful reform.

II. Enhancing the Quality of the Patent System

The Request for Comment offers six draft proposals for enhancing patent quality:

1. Applicant requests for prosecution review;
2. Automated pre-examination search;
3. Clarity of record;
4. Review of and improvements to quality metrics;
5. Review of current prosecution model; and
6. In-person interview capability.

Many of these constitute efforts by the PTO to evaluate how the agency can best serve patent applicants through improvements to the patent prosecution process. Although reducing bureaucracy and overhead are important, the foremost concern for the PTO, Congress, and courts evaluating potential changes to the patent system should not be the interests of patent applicants alone, but rather society at large. Speeding up the prosecution process is a valuable goal, but only if it does not come at the expense of quality of the ultimate outcome.

For the question facing the PTO of how to measure and produce quality patents, we suggest abstracting the question into two halves: process (how does the PTO determine whether granting a pending application would result in a quality patent) and substance (what constitutes a quality patent). The questions proposed above focus overwhelmingly on process, even as the latter question, on substance, remains very much a moving target. Much of the key guidance on a quality substance threshold for patents stems from Congress and court precedents, rather than the PTO. But it is critical to understand that process questions under consideration inherently involve measuring applications against a substantive standard, and getting that standard correct is critical to reaching

² Request for Comments on Enhancing Patent Quality, 80 Fed. Reg. 6476 (Feb. 5, 2015).

³ https://youtu.be/3bxcc3SM_KA

the desired outcome of enhanced patent quality.

A third challenge for achieving the goal of a quality patent system, in addition to process and substance, is articulating the proper scope for patent rights – in other words, how much exclusionary power does a patent confer, in practice. Some aspects of the practical power of a patent may be addressed through current reform discussions around litigation process, but those discussions do not constitute full explorations of the legal scope of the patent itself.

Achieving the stated goal of this RFC to maximum effect is impossible without evaluating and improving each of these three aspects of patent quality: process, substance, and scope. We are glad to see the PTO tackling improvements to patent quality that are fully within the agency's control, but we encourage the agency as well to be an advocate for true patent reform. The mandate of PTO needs to be not only providing good service to applicants for patents, but to the American public, and to the statutory and Constitutional purposes that set the agency's mandate.

At Mozilla, our product focus is on open source software. Clearly, software is unique and distinct among technical endeavors, and the factors and balances that most promote innovation, investment, and discovery in software are different than in other disciplines. Open source software, such as the Firefox web browser and Firefox OS mobile operating system, further accentuates these differences, through its origins as a deeply collaborative and open enterprise, with few if any obstacles to reuse including for commercial gain.

It is impossible to optimize perfectly for patent quality across all disciplines that produce patentable innovations using the same approach to process, substance, and scope. The goal of the patent system is to promote progress, and that objective remains the same across all disciplines, including open source software. But the current implementation of that goal from the perspective of open source software is not delivering adequately. Whether reform comes from improvements to all fields, or a rejection of the historical policy of blind uniformity across all disciplines, or both, it is sorely needed.

The remainder of this filing offers a roadmap for effective patent quality reform for software, including reforms for process, substance, and scope.

III. Reforming the Patent System in the Context of Software

Software represents one of the biggest areas of recent PTO work, and one of the most

controversial. The factors for consideration in advancing the goals of promoting progress are very different with respect to software than with other technologies. We offer proposals for patent reform addressing process, substance, and scope to advance the goal of this filing of enhancing the quality of patents and the patent system.

A. Process to evaluate applications

Enhancing the quality of a patent system requires optimizing the process of determining whether a pending patent meets the system's standards. This is the issue targeted by the six specific proposals in this RFC, and it is the domain of reform most squarely within the authority of the PTO.

Of the six proposals in the RFC, some are more administrative in nature, such as how the PTO can assess its own success (#4) and manage the mechanics and bureaucracy involved in applications (#1, #5, #6). Only two (#2 and #3) are directed towards substantive review improvements, changes that would significantly impact which patents get granted and which rejected. Of those two, we welcome increased investment in searching prior art and examples of relevant work (#2), as well as improving transparency into the process for subsequent review (#3). But neither of these will go far enough to capture all of what the outside community can provide as input to the PTO to make a determination of patentability.

We encourage the PTO to consider adopting a peer review board of open source software developers, technologists who are embedded within the software community, and who have the most information and awareness of the state of the art. Such a board could be build either through or on top of the existing Patent Public Advisory Committee, or as a new structure. These individuals would be better able to steer patent examiners towards relevant art than non-technologists, without needing to take an active role in making the legal or factual determination of originality themselves. We acknowledge this would not be a trivial process to design, and that confidentiality in patent applications is important. But such a mechanism would be an improvement on automated procedures, as to achieve equivalent effectiveness such systems would require standardization of open source software development and tagging of code and development processes across a distributed and highly eclectic global community.

B. Substance of a quality patent

A key factor in patent quality is the substance of the patent application and resulting patent. What does a quality patent include? More important, perhaps: what must it not

include? Court cases are continuing to define this question as well on an ongoing basis. Two changes regarding substance would help strengthen the patent system's ability to protect innovation and competition for software: a limit on patent exclusion of interoperability, and a requirement that patents include proof of concept demonstrations and not merely vague assertions of potential functionality. The PTO does not have sole authority to make these changes, but nevertheless has opportunities to influence and advise on the evolution of patent law going forward above and beyond its specific authorities. We encourage the PTO to embrace this capacity and support these proposed reforms.

1. Exclusions for interoperability

Software inherently interacts with other software, constantly, including software developed by other entities. Allowing exclusionary rights to impede technological interoperability would go far beyond protecting infringement of the technology itself, with the potential for broad, negative ramifications for competition in adjacent markets. To enhance patent quality and tailor exclusionary rights in a manner that promotes innovation and competition, patents must not encompass capabilities to exclude interoperability with other technologies.

2. Proof of concept demonstration

Vague software patents often include a complete lack of clarity in how the described software would function. Generic ideas may be protected by patent solely by virtue of the "innovation" of using software to achieve them. The Supreme Court in *Alice v. CLS Bank*⁴ struck down this approach, saying that something more is required. One component of this "something more" should be a novel demonstration of technology innovation, in the form of a proof of concept, such as an algorithm or functional code, to demonstrate that the would-be inventor has in fact identified a protectable solution to a problem, rather than merely the general outlines of a problem for which a solution would be valuable. Furthermore, an algorithm and/or code would constitute a roadmap to enable others to implement the idea after expiration of the patent, fulfilling the balance that underlies the patent system: a temporary exclusionary right offered in exchange for making the technology available for others to use freely on expiration of the right.

C. Scope of the patent right

⁴ *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 134 S.Ct. 2347 (2014).

As we use the term, scope describes the limits of what the patent right of exclusion confers to the rightsholder. We propose three changes to scope that would improve patent quality in the context of software: shorter time limits; no liability for innocent infringement; and proportionality of damages. Congress is the primary authority for patent scope, yet there are diverse opportunities for the PTO to advance the proposed changes in an advisory capacity.⁵ As with patent substance, above, we urge the PTO to embrace this opportunity and promote these reforms.

1. Shorter time limits

Software development runs at a fast pace, and this rapid evolution has a galvanizing impact on innovation. Yet the initial timeline for exclusion rights associated with a patent is 14 years. While this time may be properly calibrated to allow for recovery of initial investment costs and suitable profits in other disciplines (a question beyond Mozilla's institutional expertise), in the domain of software, it represents an absurdly long window, likely a decade beyond the relevant shelf life of the underlying software. Shortening the window of exclusionary power associated with a software patent to 5 years instead of 14 would greatly encourage innovation by ensuring that techniques and technologies that have faded into the milieu are available for reuse in future innovations.

2. No liability for innocent infringement

One of the primary criticisms of software patents is that they are too broad and vague. This trend may be heading in a better direction in the wake of *Alice vs. CLS Bank*. But until existing overbroad patents are invalidated, and adequate reforms are established for patent substance to prevent overly vague patents in the future, many innocent infringers face potential future liability despite having no knowledge and no intention of violating another's patent rights. The result is a chilling effect on technology investment and innovation. Even as aggressive patent holders (including non-practicing entities) wield vague patents to siphon away significant portions of successful developers' rewards, reducing future growth and investment, other developers struggle to secure investment capital needed to realize their ideas and dreams in fear of potential patent liability as a result of innocent infringement.

⁵ Specifically, the PTO is charged by Congress with providing advice and guidance to the President (through the Secretary of Commerce) and other Federal agencies. 35 U.S.C. § 2(b)(8)-(9). Additionally, legislative hearings, public speaking, and other venues provide PTO leaders with opportunities to develop and advocate for broader reform.

Software developers should benefit from a waiver of liability if able to successfully convince a jury that their infringement was unintentional. For example, open source developers keep public records of their development processes. Showing the existence of code to implement software covered by a patent, if that code was developed prior to that entity's filing of a patent application, would create a strong impression of innocent infringement by virtue of parallel invention. The appropriate remedy in such a scenario would be a waiver of liability for the innocent infringer, and, potentially, a review process by the PTO to determine whether the patent at issue was properly granted.

3. Proportionality of damages

Not all software is created equal. Software technology that constitutes the core of a multi-billion dollar industry is worth more than a new way of approaching a problem that marginally improves efficiency of an existing solution – but both are potentially capable of receiving a single U.S. patent and the exclusionary rights it conveys, as well as the ability to demand significant financial damages for patent violation. The result is an enhanced chilling effect on innovation, as even minor violations of the exclusionary rights of others, if committed by a successful Internet or software business, can be used for extortion above and beyond what would be considered reasonable within the scope of the patent and technology at issue.

A better approach would be to set limits on damages that are proportional to the significance of the patent in question as part of the value of the defendant's product. For example, a jury trial could determine such a percentage, as occurs in other legal contexts such as comparative negligence. This percentage could be used as an explicit multiplier of what would otherwise be the damages associated with infringement of the patent at issue, e.g. if the entirety of the patented technology had been infringed with no additional innovation or technology.