Tim O'Reilly

Viewpoint

The Internet Patent Land Grab

At about 6 p.m., February 29, I posted an open letter to Jeff Bezos of Amazon.com on my Web site. I asked my customers to join me in protesting Amazon.com's suit against Barnes & Noble for infringing Amazon.com's "1-Click" patent. This event made news because my company sells hundreds of thousands of books each year via Amazon.com to a constituency made up largely of serious software developers.

I had decided to take a stand, not because I thought Amazon.com was the worst offender when it came to software patents, but because I thought that I might be able to get Amazon.com's attention in a way that I was sure I couldn't with companies like Walker Digital (Priceline) or IBM that have made patents a key part of their business strategy. After all, Amazon.com is a company that has benefited enormously from the open standards of the Web.

By the time I came to work the next morning, there were over 1,000 signatures and additional letters on my site, and over the next three days, I received 10,000 letters in support. After a day and a half, I received a call from Bezos, and after a long conversation, he agreed to join me in calling for a closer look at the dangers to the industry in software patents. (For the full record, see www.oreilly.com/news/patent_archive.html, and www.oreillynet.com/patents.)

As a result of my protest, Bezos made a number of suggestions for reform in his own open letter (www.amazon.com/patents), including development of a prior art database, a public opposition period for new patents, and a shortening of the term for software patents.

In the months since my initial protest letter, and Bezos's response, I've spoken with many people about problems and possible solutions. I claim no expertise in patent law. However, it's important for those who are involved in the patent system to listen, as I have, to those true innovators whose rights are being trampled by the expansion of patents to the Internet software sector.

Here's the gist of what I've heard:

The working programmers who are building the innovative new applications of the Internet—the actual inventors whom the patent system is supposed to protect—feel threatened by the expansion of software patents. The Internet industry was built on open standards, open source, and a great deal of imitation. Now the rules are changing, as lawyers and big companies get involved, and the people who've made this one of the most exciting and dynamic industries out there today are worried. As Tim Berners-Lee said to me in email correspondence: "The whole development and standards process … is in a precarious state." At least in the Internet industry, and quite possibly in all of the software industry, the consensus among actual developers seems to be that patents hurt rather than help their ability to innovate.

The patent office and those in Congress who oversee it hear daily from those who are invested in the expansion of the patent system. Billions of dollars are at stake. But it is the responsibility of government to act not just on behalf of those who lobby them, but the public. The vast majority of software developers don't believe the system works for them.

Further, there is a general belief that the people filing patents are quite often *not* the people who have actually made substantial inventions. Instead, patents are going to companies that are adding small features to broader inventions put into the public domain or have formerly been protected only by copyright. In many cases, patents are being granted on techniques already in wide use, but have not been patented or published in the kinds of journals the patent office searches looking for prior art.

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Even the individual inventors listed on many software patents often don't believe the patents are legitimate. As one developer at a large software company remarked to me: "I have my name on nine patents [including a prominent Web patent] and I think all of them are a joke."

One frequently cited problem is that the patent office doesn't require companies to proactively search for prior art. While some effort has been put into prior art databases, in general there seems to be a "don't ask, don't tell" approach, in which companies don't look thoroughly, and the patent office doesn't have an affirmative requirement for applicants to search. What's even worse, it seems as though there are actual disincentives to knowing about prior art; since there are penalties if you knowingly ignore prior art, ignorance is the best defense. Further, once a patent is granted, there are substantial benefits to the patentholder, even if prior art is subsequently brought up as a defense against patent infringement.

In short, unless the patent office makes more rigorous search and disclosure by applicants a requirement, the industry is not likely to police itself. Based on some of U.S. Patent Office Director Dickinson's recent remarks, there may be some openness to placing this burden on the applicant, and while such a move is likely to provoke furious opposition from the patent bar and most applicants, I am confident most working developers would applaud that move.

Even if the patent office does require patent applicants to search for prior art, finding it can be difficult because of huge gaps in the record, and so much prior art is not in searchable databases. However, I believe it would be possible to use Internet tools to enable public comment on existing and pending patents, and to provide leads for more formal prior art searches. Apparently, a recently enacted law requires disclosure of patent applications seeking international protection 18 months after filing. While a formal "opposition period" is not likely to be supported by the patent office, I believe a grassroots effort to bring relevant prior art to the attention of patent examiners would have a powerful effect. As has often been said, sunlight is the best disinfectant.

Beyond the prior art problem, though, the courts seem to have broadened the scope of what is patentable. Internet software is now sufficiently powerful so that many techniques widespread in the physical world can be transferred to the Internet by anyone with a minimum of effort. For years, this was done without the aid of patent protection, on the grounds that much of what was being done was obvious. Now, because of favorable rulings by the courts and the patent office, companies are rushing to patent, with the result that companies are being granted patent monopolies on obvious techniques not by virtue of having invented them, but by virtue of having been the first to file.

THERE ARE TWO CLASSES OF OFFENDERS: COMPANIES trying to take advantage of the situation, seeing the patent land grab as a huge financial opportunity; and companies patenting defensively, lest someone else take away their right to use their own inventions.

In either case, the system has become a huge tax on innovation, rather than the spur to innovation the patent system is supposed to provide, as resources are shifted from developing innovations to protecting them.

Despite the claims of patent advocates that patents protect the rights of small inventors, the system is tilted heavily in favor of companies with large patent portfolios. As one lawyer from a company with a huge patent portfolio commented to me about Amazon.com: "It's not a big company. It doesn't have enough patents to play this game." If Amazon is too small to play, I suspect that the average small inventor doesn't have much chance of profiting from a software patent. The only small players who seem able to benefit are those whose aggressive lawyering allows them to extract a tax from companies who find it cheaper to pay a licensing fee than to battle a patent in court. Real inventors trying to build real businesses on the basis of technical innovations usually don't have the time or resources to play this game.

While it is difficult to definitively establish boundaries around software or Internet patents, it might be desirable to have a moratorium on the granting of business process patents as applied to the Internet, just as there has been a moratorium on Internet taxation. This would allow the industry and the patent office more time to understand the scope of the problem and possible solutions. This is a solution suggested by Harvard Law professor Lawrence Lessig in a *Wall Street Journal* editorial (Mar. 23, 2000).

A patent, once granted, is substantially protected by a presumption of validity overcome only by "clear

and convincing evidence." Further, in the case of a challenge, it appears that the patent holder is currently able to simply amend the patent, with the result being unappealable. This means once patents have been granted, there is substantial risk that companies will be unable to use common techniques without payments to patentholders even in cases where prior art clearly exists.

One alternative, recently suggested, is to change the standard during reexamination from "clear and convincing evidence" that a patent is invalid to the lower standard that a "substantial new question of patentability" has been raised.

While there is a fair amount of scorn regarding some particularly egregious patents and a low opinion of the patent office among many industry participants, many of those who are knowledgeable about the system generally believe the patent office is simply strapped for resources, and within its constraints, do as good a job as it can. Based on this concern, there is a feeling that additional resources for the patent office would be desirable. However, there is some concern that because it draws its fees from patent applicants, there is an incentive for the patent office to regard applicants, rather than the public as its "customers."

Regardless of the final solutions, our biggest message is that all is not well in the Internet and e-commerce industry. The roots of innovation in what has been, up to now, an extremely vibrant area of the economy are seriously at risk. Decisions made—or not made—by those overseeing the patent system will have enormous repercussions for years to come. C

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