

How Patents Can Protect Open Source Technologies

By John C. Checco, CISSP

Executive Summary

Open source communities are, by design, small quickly reactive teams of innovation. They are the flower children of this decade. Their intentions are wholly to advance innovation. So why then are commercial enterprises taking aim at these defenseless groups? Is true innovation a real threat to the livelihood of these vendors? The theatre is the Corporate America and the weapon of choice is Patent Litigation. Past battles may paint a dark picture, but the war is not as easily won as one thinks.

What is the real value of a patent?

Traditionally a patent protects its owner from infringement on a novel idea from companies (such as Microsoft) producing copycat items¹. But there are several major factors that dilute the protection of utility patents:

Prior Art: I, myself, am a product of the dot-com bust; and one of the faults I saw was the obscene willingness to outsource technology implementations at any cost as a trade-off to get to the market sooner – which usually included sharing the innovative rights to the implementing companies. Thus, if (and when) the startup went bust; the implementing company took full ownership of the innovation and repackaged it for their own benefit. As displaced entrepreneurs eventually found work in other companies or new startups; they carried with them the intellectual properties of their previous work; mostly unintentional or unaware of the prior employers' IP agreements with those implementation vendors. Our current state is a mashup of many small companies and intellectual property being cross-bred. Unfortunately, there is no easy solution to this problem; so any litigation counsel must take this into account.

Internet Time: In recent years, there has been much litigation with utility patents from business processes such as shopping carts and auction features to technology processes such as the Blackberry information network. But litigation is time consuming; finding the absolute source for intellectual property is difficult in the post dot-com era, and the patents themselves – especially business processes – are under scrutiny. The traditional conditions for “Novelty And Non-Obviousness”² are difficult to prove because internet time has greatly usurped the time it takes for an idea to be patented (3-5 years); and then the litigation to take place (another 2-3 years). It is conceptually difficult to prove without a doubt that an idea at its conception was indeed novel and non-obvious in the past when there is only a limited amount of information to confirm or deny its claims.

Scope: Many utility patents for business and technological processes have been granted without the empirical details needed to uphold the patent. Of course, this is the balancing act that plays out between an inventor and the patent agency: The inventor wants to ensure the patent covers as

¹ Reference: <http://www.uspto.gov/web/offices/pac/doc/general/index.html#patent>

² Reference: <http://www.uspto.gov/web/offices/pac/doc/general/index.html#novelty>

broad of an area as possible, and the agency needs to ensure the patent covers only what is necessary to protect the claims. The USPTO has limited guidelines to determine whether a patent application has the proper amount of information and details to ensure a patent claim is properly scoped. There are many examples of this from generic descriptions of transmitting information over wires to holding items for purchase (shopping carts). Not that these were not novel ideas – truly they were in their day and age – but the accompanying details were so vague that transmitting information over wires could refer to traditional phone calls, data networks and video feeds. It is only recently that there is an effort to build more stringent guidelines for utility patents.

Yet, the value of holding a patent is great as a technology measurement for a corporation, no matter how diluted one may perceive the contents of a patent. Indeed, patents are a metric and technical valuation of intellectual property that a company has.

Sidebar: My idea of a well-written patent follows the scientific method: define the problem, introduce the hypothesis (ideas/claims), show the various affected elements (control variables, manipulated variables and dependent variables), define the materials and procedure (details of the patent), and finally, show the observations that support the patent claims and conclusions as to why the patent should be granted.

Patents as a Weapon

In the headlines of the recent accusations that open source Linux has violated many as 235 of Microsoft's patents; there are some enterprises willing to pay the software giant to bypass them in any open source patent litigation³. While SCO has tried this same tactic several years ago; Microsoft's success over SCO's efforts, albeit limited, is simply a factor of company size. Microsoft to date has not even shown where the patent infractions occur; nor has it divulged any material evidence of such infringements. The open source community has no other options than to deduce this tactic as corporate bullying – the large deep pockets of the enterprise giant against the myriad of splintered open source groups – SCO had the idea, but did not have the size. And Microsoft, as it has done with every piece of original non-Microsoft software, has come into the picture as a more powerful player to make this idea their own. If its history in the software world is any indication of its intentions, the open source community should prepare for a long rough ride.

Larger companies are taking one of several stances: align themselves with SCO/Microsoft, take on the all too infamous wait and see attitude, ignore the entire situation, or align themselves with the open source communities. IBM has quickly opted down the latter of these options; throwing its own patents into the open source community like free food⁴. Is IBM simply using the open source community as a pawn in a much larger battle; or is there true altruism in their decision? Perhaps the truth in their gesture lies somewhere between the two poles. Although this

³ "Xandros Takes Microsoft's Linux Patent Protection," June 2007, ref. <http://www.internetnews.com/dev-news/article.php/3681221>

⁴ "IBM Pledges Patents to Open Source," January 2005, <http://www.internetnews.com/dev-news/article.php/3457381>

declaration was made in early 2005 (in the SCO litigation heyday); there has yet to be any mass implementation done by the open source communities to take advantage of this offer.

Patent Warfare

There is, however, hope on several fronts.

Non-Obviousness is no longer obvious: Companies like IBM and Microsoft file thousands of patent applications each year; the purpose is twofold: to maintain their portfolio of measurable intellectual property, and to overload the USPTO process, thus compromising the scrutiny of the examination (which results in more broadly defined patents being granted). But, the patent examination process is under scrutiny, and changes are on the way... ironically because of a non-utility patent case involving an automobile gas pedal⁵. Although the ruling allows one to create a unique (patentable) idea from the non-obvious combination of existing patented components, without retribution from the original patent owners; it has been since overturned and sent back to the courts. The current battle ushers in a new era of intense focus on patent examination and validity. We have yet to see what concrete changes are in the making and what the long-term effects of these changes will be. But one thing is certain, the Teleflex vs KSR case ensures that no patent case will be trivial, and there are no giants in the courtroom.

Patents as a defense mechanism: Although IBM has taken the unique step in opening a small portion of their patent portfolio to open source communities, this actual impact of such a gesture is really quite small. I remember a conversation with Phil Zimmerman (inventor of PGP) back in 2002 about a keystroke biometrics technology I wanted to put in front of PGP. Although this concept sounded very interesting to him, he became quite perturbed at the fact that this technology was patent pending. And I could understand his frustration given his prior experiences with the U.S. government in developing and distributing PGP⁶. So I was surprised to find a note on his intellectual property filing in October of 2006 with the following succinct reasoning:

While patents are distasteful to me, and I have seen how they have been damaging in the crypto world, this is a purely defensive patent that I have filed. My intention is to provide royalty-free licenses to anyone implementing ZRTP under most circumstances.⁷

Patent Chess: The above two examples create a unique re-application of the patent process that has great potential for the open source community. (Note: this is not to suggest preemptive patents, but to allow for the open source community to take advantage of the patent process to

⁵ "Supreme Court Adopts New Standard on Patent Litigation" May 2007, <http://www.law.com/jsp/article.jsp?id=1177936770561>

⁶ "Merchant on an Army Trail: Phil Zimmerman", October 2004, <http://paul.blureboot.net/EncryptionAndRightsOfLiberty/node14.html>

⁷ "I-D ACTION:draft-zimmermann-avt-zrtp-02.txt", October 2006, <http://www.imc.org/ietf-rtpsec/mail-archive/msg00254.html>

prevent future litigation.) If every unique part of an open source project has a provisional patent application submitted, it immediately becomes public knowledge – whether or not a non-provisional patent application is filed within the one-year timeframe. Thus, the likelihood that a large vendor could claim it (or something similar) as novel and non-obvious is greatly reduced. And if the large vendors start making these same provisional claims, can the open source communities leverage the public availability of these documents to lessen their risk of IP liability? Or can open source developers apply the operational tactic of *Teleflex vs KSR* whereby a new unique claim can be made out of the non-obvious combination of two or more other patented claims?

Conclusion

Ideally, many of us would like to see less patent litigations, well-defined patent claims, proactive patent validity checks and a stricter patent examination guideline. Reality shows us that most of these ideals are going in the opposite direction. Great leaders have always exuded an ideal world, while operationally using the realities of their time to gain success. The open source community is full of bright potential leaders, and the realities of the current patent threats can be mitigated. Like many legends and myths; this story has all the makings where giants can be overthrown by smaller rivals using the same tactics in novel and non-obvious ways.

About the Author

John C. Checco [CISSP] is a member of Infragard NY, (ISC)², ASIS NY, WSTA Advisory/Content Committee and president of Checco Services Inc. Feel free to send comments to “john” dot “checco” at “checcoservices” dot “com”.