
Smart IP for smartphones

As technological marvels, smartphones benefit from the whole gamut of IP protection. Brian Klock and Kathryn Easterling explain how patents, copyrights, and IP litigation affect the ability of innovators in the field

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Oct 6 2016

Smartphones have evolved from exciting new accessories to essential tools, as the instant access to information afforded by such technology has become an integral part of our daily lives. Their ubiquity has been accompanied by consumer demand for better and faster features with each new release. Such rabid consumption requires near-constant innovation by smartphone developers, striving to balance their desire to freely create new technology and grow their market with the desire to protect their own inventions and inhibit others from using them.



While some detractors view intellectual property as a detriment to innovation, those less cynical see it spurring creativity and providing strategic tools to help preserve a harmonious relationship between the two desires.

The smartphone patent world

A plethora of patents

The volume of patented smartphone technology is staggering. A 2012 tally by RPX Corp. found there were 250,000 active patents relating to smartphone technology – which at that point accounted for one sixth of all active patents.¹ While the specific statistics may have changed over the past few years, and while not everyone will necessarily agree on what is and is not a smartphone patent, smartphone-related patents undoubtedly remain dominant. Unsurprisingly, the market surrounding such patents is highly lucrative. In 2013, it was reported that Microsoft was making \$2 billion per year in revenue from patent royalties on Android products.² The popularity and profitability of smartphone patents demonstrates their value to inventors.

A sometimes painful patent system

Beyond their monetary value, patents can provide a useful strategic tool when negotiating with competitors. Obtaining patents, however, can be difficult and costly. The patent system is intended to promote technological progress by protecting the rights of innovators, but the patent laws and recent court decisions raise several apparent barriers to obtaining patent protection. The majority of smartphone patents involve some sort of computer-implemented idea, and patent applicants often must overcome Section 101 of the Patent Act, which precludes patent protection for inventions deemed to encompass mere abstract ideas.

Novelty and obviousness under Sections 102 and 103, respectively, are also of concern, especially when considering the above statistic that one-sixth of all active patents may be smartphone-related patents, to say nothing of inactive patents that, although not enforceable, can still preclude a subsequent patent on an invention deemed to be the same or too similar.

Worries over patentability of smartphone technology may not be as dire as they seem – a November 2012 internal United States Patent and Trademark Office (“USPTO”) study found that over 80% of the patents granted on smartphones are valid³ – but there is no question that if a patent is to be obtained, the underlying subject matter must overcome these statutory hurdles.

The cost of obtaining a patent can be substantial. A basic patent with few claims and quick issuance can cost thousands and sometimes tens of thousands of dollars in attorney and USPTO fees, and the length and complexity of some smartphone patents may cause costs to skyrocket. There is, however, some relief from high USPTO fees such that those costs should not be a deterrent to individuals and small entities filing for patent protection.

The USPTO reduces patent filing fees by 50% for “small business concerns,” as defined by 37 CFR 1.27. Furthermore, so-called ‘microentities,’ which includes individuals who have filed fewer than four prior patent applications and meet certain income requirements, the discount for certain USPTO fees is 75%. This reduction serves as encouragement to all entities to keep innovating and filing for protection, regardless of financial situation.

Despite the costs and hurdles that must be overcome, obtaining patents may be critical to a smartphone business. While much of what is considered 'newsworthy' involves tech giants, almost equally important is the ability of smaller entities to innovate while working within the patent system.

A 2015 study out of Stanford provided an in-depth look at exactly how patent ownership affected smaller entities in the smartphone industry.⁴ Using a selected group of market participants and analysing publically available data, the study found that patents actually enhanced the ability of smaller entities to gain entry to the market and maintain success. Smaller companies with a patent portfolio had greater longevity, were better able to receive investor funding, and had higher "exit" potential – all of which means more profits and better backing.

They were also less likely to be a named defendant in smartphone patent litigation, meaning fewer funds went towards litigation and more funds could be earmarked for further innovation. Indeed, it appears as though patent ownership is a major asset to innovation for smaller entities.

Playing peacefully with others

Licensing may be the keystone for harmonious interaction between patents and innovation. By licensing patented technology, the licensee obtains the ability to use and improve upon prior technology without fear of legal repercussions, and the patent owner receives compensation for its hard work obtaining a patent. Licensing requires cooperation between the two parties, and a successful license avoids contentious litigation and frees up resources that would have been used to defend a lawsuit for other pursuits, such as innovation.

It also requires negotiation between the two parties, allowing smaller entities without as much capital to potentially obtain licensing rates more in sync with their financial situation. And of course, licensing can be lucrative for the patent owner. In 2013, Microsoft alone made over \$3bn from its licensing agreements, and prefers to make such deals instead of going to court.⁵ Moreover, a small innovator who owns patents may be able to cross-license to obtain more favorable licensing terms.

When licensing and negotiations fail, patent owners may turn to litigation. Almost everyone has heard of the "smartphone patent wars," especially the prolonged battle between Apple and Samsung. Litigations such as *Apple v Samsung* have been waged for years both domestically and internationally, with challenges of everything from operating systems to ornamental designs, and billions of dollars have exchanged hands.

Indeed, the threat of litigation is potent, as it is accompanied by great expenses, lengthy proceedings, and sometimes irreparable damage to business relationships. But, notably, these suits have not appeared to slow down innovation at all. Smaller entities, who would be most adversely affected by litigation but lack deep pockets, are usually not the ones targeted as defendants.

Tech giants, on the other hand, typically have the resources to defend or settle a suit. It is more profitable for these companies to keep inventing than to let a lawsuit serve as a deterrent.

A good sign for innovators was the Rockstar Consortium sale in late 2014. Rockstar was a group of smartphone tech titans – Apple, Microsoft, and Sony among them – that in 2011 outbid Google for over 6,000 patents from Canadian telecom company Nortel. Intended as a challenge to Google and the Android technology, the move caused understandable concern for Google and other non-consortium smartphone makers over potential litigation, and suits were indeed filed against Google, Samsung, and other entities.

However, in 2014 the consortium sold 4,000 of those patents to the RPX holding company, with the intention that RPX license them to other companies.⁶ The remainder of the patents had been distributed to other companies, including Apple. Some commentators labeled this sale and subsequent licensing as the end of the "smartphone patent wars," as it espouses licensing over litigiousness.

Such increased cooperativeness between competitors can only be good for innovation. Smartphone innovation going forward will likely be defined by several smaller innovations coming together over time to create new and improved products. A willingness to share ideas, whether through licensing or other arrangements, allows inventors to exchange information and foster ideas without having to spend energy and money on litigation.

Patent Trolls

Non-practicing entities ("NPEs") – sometimes called patent trolls – often demand what seem like unreasonable license payments. Any demand letter received should be investigated to identify legitimate claims of potential infringement and avoid subsequent liability for willful infringement. However, some NPEs use a shotgun approach to assert vague claims of infringement against hundreds of companies at once. Their hope is that some of the entities will be frightened by the threat of a lawsuit and pay licensing fees without thoroughly investigating the claims, to avoid a legal battle. Oftentimes, the victims of these demands are small entities that would be unable to afford a lawsuit and take a license out of fear.

Copyrights and smartphones

While not making as many headlines as smartphone patent developments, copyrights also play a significant role in smartphone innovation, as they provide a cheaper, easier option for inventors to obtain protection for certain works, such as software or screen layouts. Copyright protection subsists from the moment of creation, and registering a copyright costs only \$35 per application.

In addition to lower costs, a copyright application generally involves lower legal fees and fewer requirements than a patent application. The creation merely must be fixed in a tangible medium, be original, and show minimal creativity. Of course, copyrights do not provide protection as broad as patents, since among other things they require proof of an actual act of copying to be infringed. However, such protection may be valuable for certain aspects of a smartphone, and in situations where an invention is eligible for either patent or copyright, it may even be preferable.

For example, developers of smartphone software apps are often individuals or smaller entities, meaning the low filing fee and minimal application process of copyright is an attractive form of protection. Apps also include both software code and an app-specific design, both of which can be copyrighted to provide two-pronged protection. Such protection may be important, because smartphone app innovation is still rising. As of June 2016, there were 2.2m apps available in the Google Play Store, and 2m in the Apple store. For Apple, this is a marked growth from June 2015, when their store had 1.5m apps available for download, and a greater surge than the previous year, when there were 1.2m apps available.⁷

From the perspective of infringement, copyright law gives innovators a defense unavailable in patent law – the doctrine of fair use. Under Section 107 of the Copyright Act, fair use allows unlicensed use of a copyrighted work in certain situations. The use of the work must pass a four-factor test, which includes: a) the purpose and character of the use; b) nature of the copyrighted work; c) amount of the copyrighted work used; and d) effect on the market for the copyrighted work. Fair use is especially useful in smartphone innovation for software, as some copyrighted software forms the building blocks of smartphone functionality and communication. Allowing innovators to use these fundamental elements without fear of legal repercussions encourages innovation without hindrance. In this way, fair use functions much like licensing does for patents – minus monetary compensation for the rights holder.

The battle between smartphone innovators and rights-holders saw a decisive win for innovation and fair use in June of 2016. A California jury found that Google's use of Oracle Corp.'s Java software in its Android products was not a violation of copyright law, but instead constituted fair use.⁸ The crux of the case involved application program interfaces, or APIs, which are used by software programmers to specify the particular ways in which software components should interact.

Google used Oracle's Java APIs to assist with the creation of its Android apps. The Federal Circuit had found Oracle's Java APIs to be eligible for copyright, a ruling which would have been a blow to software developers, as Java APIs are *the* APIs used in mobile computing, and their loss would likely stymie mobile app development. The jury's finding of fair use by Google was a victory for all innovators, allowing them to use the APIs without worrying about licensing Oracle's copyrighted Java.

Summary

Intellectual property protection, although sometimes limiting, is ultimately an asset to innovators in smartphone technology. As in-house counsel of a smartphone-producing company, taking full advantage of intellectual property rights without detracting from potential innovation can be done by utilizing a few key tips:

- Research what type of protection is best for your innovation. Both patents and copyrights have their benefits and drawbacks, and it is important to know which one will be most effective for your company in the long run.
- If you are confronted with a demand letter, investigate. Make sure the threat is legitimate, and that it isn't simply a ploy to extort money from your company. This could potentially save thousands of dollars down the road, which could be used to fund further research.
- If you're part of a small business, make sure you are reaping the cost-cutting benefits of 37 CFR 1.27 when filing. The provision is in place to encourage you to protect your works – take advantage of it.

While the above points may seem basic, they are often ignored, leading to larger and costlier issues down the road. As discussed above, the evidence points to a positive relationship between smartphone innovation and patent law, and it will benefit everyone to preserve the status quo.

Authors

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The print version of this article was revised by the editor due to space limitations. This is the authors' approved version.

Footnotes

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