

Forking the patent system: Pollyanna in Patent-Land?

By Peter Langley

A powerfully effective system of social organisation. A template for driving widespread, collaborative innovation. Crafted through a complex, multi-expert process of collaborative development. Constantly evolving. Largely above, and indifferent, to the perceptions of ordinary consumers. May fork in interesting ways.

That these attributes apply equally to both patent law and to open source is one of those interesting paradoxes worth reflecting upon for a moment. The orthodoxy is that the systems of patent law and FOSS are conflicting and inevitably mutually exclusive – it is perhaps surprising that so many defining characteristics are common to both. And quite possibly these apparently incompatible systems may converge closer still: In this short essay, we'll examine how patent law might be in the process of forking in ways not only favourable to FOSS, but that excise the tensions between patent law and FOSS as systems for driving innovation. It may prove Pollyanna in Patent-Land, at least in the very near-term. But let's view the world through that lens for a moment and see what it reveals.

We may possibly be at the start of a major fork in the patent system, reflecting two distinct modes of innovation: the first mode, where realising a single innovation is laborious and vastly costly – pharmaceutical innovation, for example, where a single new compound can cost \$500M and 10 years to develop, can generate \$10Bn a year in sales and is protected by a small handful

of patents. And the second mode, where innovation is cheap, rapid, incremental and at times effortless and inevitable. Products are affected by thousands, perhaps tens of thousands of patents. For this second mode, one is reminded of Eben Moglen's Metaphorical Corollary to Faraday's Law: 'Wrap the Internet around every brain on the planet and spin the planet. Software flows in the wires. It's an emergent property of human minds to create.' So it is in this second mode that FOSS operates.

Legally, the first mode is characterised by the ready availability of injunctions to stop clone products; and by the possibility of very substantial damages. Patent law has traditionally assumed that injunctions and the possibility of substantial damages is the *sine qua non* of its existence; treating both modes of innovation in the same manner. But in recent years, we have started to discern an understanding that these different modes of innovation should just possibly be treated differently in legal terms – that where innovation is cheap, rapid, and incremental (i.e. where FOSS plays) then injunctions might possibly be much harder to obtain, and damages should be very low. If patent law evolves in this direction (and evolution in law can be as halting, unsure and provisional as it is elsewhere), then patent law will not only cease to pose the existential threat it currently poses to FOSS, but may bring itself into alignment with FOSS' ultimate goals of promoting the open and co-operative sharing of innovation. FOSS may then find that it can co-exist quite happily enough within a forked patent system.

We'll look now at some of the specifics. First, injunctions. In recent US patent litigation, the grant of an injunction requires proof of a sufficiently strong causal nexus relating the alleged harm to the alleged infringement – which typically requires showing that consumers buy the infringing product 'because it is

equipped with the apparatus claimed in the patent and not merely because it includes a feature of the type covered by the patent'¹¹⁵).

For many cases involving FOSS, this causal nexus may well prove to be exceptionally difficult to establish. Consider, for example, a specific kernel function allegedly covered by a patent – could one in practice adduce compelling evidence that consumers buy say a mobile phone solely because it has that specific kernel function? If not, then an injunction may not be available. This approach leaves entirely open the possibility of injunctions to prevent copying of a feature that is genuinely so exceptional and significant that consumers buy the smartphone specifically because of it – but as smartphones continue their evolutionary path as multi-function tools, capable of doing thousands of different tasks, the possibility of the emergence of a single new and patented function that overwhelmingly drives consumers purchasing behaviour seems not only remote but also fast-receding. A radical new capability like 3D holographic real-time imaging would suffice – but I'd struggle to identify anything in say the kernel that would meet this standard. So for most FOSS developers, the injunctive risk is both distant and diminishing.

That Apple was denied an injunction¹¹⁶ against Samsung, despite the 21 August 2012 jury returning a verdict of infringement, shows how difficult in practice meeting the causal nexus standard can be. The US Court of Appeals for the Federal Circuit will hear Apple's appeal from this judgement in mid 2013; no-doubt, a defining moment of the Smartphone Wars, and

¹¹⁵ The Federal Circuit's Apple II opinion: *Apple, Inc v Samsung Electronics Co., Ltd* 695 F.3d 1370 1374 1376 (Fed Cir 2012)

¹¹⁶ See order Denying Motion for Permanent Injunction, *Apple, Inc v Samsung Electronics Co., Ltd* Case No. 11-CV-01846-LHK, on appeal to the Federal Circuit as of early 2013

developing patent jurisprudence too. If the Federal Circuit supports the rigorous application of the causal nexus text to injunctions, then the fork will be real and solid: one fork for the first mode of innovation, where causal nexus can generally be established and so injunctions will be available, and another fork covering much of the software space where FOSS plays, where causal nexus will be exceptionally hard to prove and so injunctions will in practice not be available – a highly attractive outcome for FOSS.

Another important theme, supplementing the highly attractive causal nexus test for injunctions, is the developing jurisprudence around the ‘public interest’. See¹¹⁷ for example: “the public interest does not support removing phones from the market when the infringing components constitute such limited parts of complex, multi-faceted products”. The broad application of this approach by the courts to software will again make it far harder for much of the areas where FOSS operates to be targeted. See also Justice Kennedy’s concurring opinion in the US Supreme Court judgement *eBay*¹¹⁸: ‘when the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for infringement and an injunction may not serve the public interest.’

Another key issue in all patent litigation is the identity of the royalty base: is the % royalty rate sought (typically in the 1% to

¹¹⁷ See order Denying Motion for Permanent Injunction, *Apple, Inc v Samsung Electronics Co.*, Ltd Case No. 11-CV-01846-LHK, on appeal to the Federal Circuit as of early 2013

¹¹⁸ *eBay Inc v Merc Exchange, LLC* 547 US 388 (2006)

2% range for software patent litigation) to be applied to the entire market value of say a smartphone, or should it be applied to a component, such as a chip in the device? Invariably and unsurprisingly, patent holders seeking royalties will base their demands on the entire market value of the end product, since it is the most valuable element in the chain of commerce, even though their patents might cover features which are relevant to just a single component in the device (perhaps the processor) and there are hundreds of other components in the final product.

The US position is both tolerably clear, and favourable to FOSS, with the most recent case from the Federal Circuit, *LaserDynamics v. Quanta*, holding¹¹⁹:

We reaffirm that in any case involving multi-component products, patentees may not calculate damages based on sales of the entire product, as opposed to the smallest saleable patent practicing unit, without showing that the demand for the entire product is attributable to the patented feature.

So, when attacking FOSS functions, patent holders will face substantial challenges meeting this evidentiary burden, which mirrors the causal nexus standard relevant to injunctions. Further, even if they can establish sufficient proof that their patented feature drives demand, in many cases, the ‘smallest saleable unit’ for software patents will be the chip or chip+ROM module in the accused products, or code itself, and that will be priced at a small fraction of the final consumer item.

¹¹⁹ <http://www.cafc.uscourts.gov/images/stories/opinions-orders/11-1440-1470.pdf>

Let's now imagine a patent infringement case covering a relatively minor software function. The function is something that (like most patented software functions) can be invented-around. What theory should we apply to working out the fair compensation to the patent holder for the infringement? One possible argument, suggested by Judge Posner in his highly influential Opinion and Order dismissing with prejudice patent suits brought by Apple and Microsoft,¹²⁰ is to say that compensation for the major software company is 'royalties capped at the minimum design-around costs' since that equates to what a prudent infringer would have paid to secure a license. Invent-around costs may be small and possibly close to zero when the FOSS community collaborates to design or invent-around a software patent. Then, on Judge Posner's theory, the damages due, even when a FOSS function is held to infringe, would be minimal.

A Quick Re-cap

Injunctions in the US may require the patent holder to prove a causal nexus between the patented feature and the demand – but this will often be hard to prove with software patents impacting FOSS;

The royalty base when assessing damages may, in the US, be the smallest saleable unit and not the entire market value (e.g. entire costs of a smartphone) where it cannot be proven the patented feature drives the demand. With patents that may impact FOSS, the royalty base would typically then be a chip programmed with the code that implements the patented feature.

¹²⁰ See Opinion and Order of June 22, 2012, Apple, Inc. and next Software Inc., v Motorola, Inc., and Motorola Mobility, Inc., Case No. 1:11-cv-08540

More speculatively, damages when infringement is found may be based on the costs associated with inventing-around - which may well be close to zero for FOSS.

Judicially led reform transformative forking of the patent system, in ways largely favourable to FOSS, would be an attractive irony. Wars, even patent wars, can lead to surprising and unexpected consequences.

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Peter has advised many leading technology companies, including TomTom, TeleAtlas, ARM, Sharp, Symbian and Unilever, as well as VCs and start-ups. He focuses on IP litigation, IP strategy and branding; he also has extensive experience in protecting software. He has handled patents in the following areas: GPS sat nav, digital mapping, semiconductors, encryption, compact disc, mobile telephony, 3G, LTE, WI-Max, femtocell, real-time holography, mobile device operating systems, mobile device UX, video compression, anti-tamper software, website optimisation, cloud-based music systems, LCDs, voice recognition, FX trading, systematic trading algorithms and wave energy systems.

He and his team have managed major patent litigation in the US (including S337 ITC proceedings), Germany, Japan, Netherlands, and the UK; ICC arbitration in the UK and Switzerland; resolved global IP disputes through mediation; acquired over \$40M in patents for various clients in recent years; and negotiated IP cross-licenses with many of the major rights holders in the wireless, electronics and software sectors.

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