

Agenda

Advancing economics in business

The new breed of patent infringement plaintiff: are they a good thing?

Patent litigation has become big business, particularly for non-practising plaintiffs, some of whom have been awarded substantial damages in recent cases. Peter Langley, Patent and Trademark Attorney, and David Bottomley, Senior Physicist, Origin, provide an economic perspective on this increasingly significant aspect of intellectual property, and consider how liquidity in innovation can be developed

In recent years, patent litigation has become a significant source of risk and major cost of doing business. One of the drivers are entities that seek to profit from innovations, not by selling new devices or new pharmaceuticals, but instead by litigation and licensing: they do not practice the innovations themselves. These entities exist along a spectrum—from companies that exist solely to acquire patents and extract maximum value, to universities, and to companies that did once manufacture, but have since exited the field and have only their patents left to monetise. They represent a new breed of patent infringement plaintiff. They can be effective because the traditional defence open to a company that is sued for patent infringement, namely to counter-sue for infringement of its own patents, is not usually possible because the entities do not sell anything. These are referred to as 'non-practising entities'. Entities of this sort have been awarded very substantial damages—most recently, NTP, a classic plaintiff with no assets other than its patents, was awarded more than \$600m in damages from Research in Motion, makers of the popular Blackberry device.¹

We might all agree about one thing:

A man had better have his patent infringed, or have anything happen to him in this world, short of losing all his family by influenza, than have a dispute about a patent. His patent is swallowed up, and he is ruined.²

And we can all disagree about whether non-practising plaintiffs are a good thing.

Non-practising plaintiffs (patent trolls to some, patent elves to others) exemplify the increasing importance of IP assets. The spectrum of reactions they provoke is broad:

- irredeemably coercive, contributing nothing to real economic progress;
- an unattractive but inevitable cost of doing business;
- the purest, most economically specialised, and hence most efficient, model of innovation.

But most people will accept that they are commercially significant.

Legislative changes may impact and reduce that significance, as may judicial attitudes. But they will remain an important symptom of what could be one of the transformative processes for any modern economy. That process involves the shift towards liquidity in the market for innovation.

The shift towards liquidity in innovation

We think that there will be three defining trends in this long-term shift.

The first trend relates to new developments leading to greater liquidity in innovation. The efficient division of labour implies that there could (perhaps should) be an effective separation between innovation and downstream activities such as manufacturing. However, this requires there to be a market for innovation. The patent troll, or non-practising plaintiff, is especially important because it is making a market for innovation—eg, by buying large numbers of patents and then litigating to monetise them. Clearly, if the patent owner wants an injunction, it will have to turn to the courts. But non-practising plaintiffs, post-*eBay v MercExchange*,³ will in the future mainly be focusing on maximising their financial return for the lowest outlay. Costly and uncertain litigation is unlikely to be the optimal solution for them. So we expect that one of the main drivers for developing a new kind of liquidity

The views expressed in this article are those of the authors.

in innovation will come from these non-practising plaintiffs, for whom the traditional approach of aggressive litigation will no longer be optimal.

An efficient market for innovation by definition maximises the aggregate surplus to patent holder and patent user. The innovation market as it stands today is, arguably, a failing market because it does not properly deliver this efficiency.

There are two fundamental reasons for this. First, take the typical consumer electronics product. There may be many tens or even hundreds of patents that have been licensed-in by the manufacturer and its component suppliers. But there will be hundreds, perhaps thousands, that have not. The cost of licensing-in these patents has not been internalised. They are what economists would call externalities.

Second, there is a lack of information: the manufacturer cannot have perfect information regarding the scope of all third-party patents that it might be infringing, or of their validity. Market failure is an inevitable consequence where you have externalities and a lack of information. Non-practising plaintiffs are so interesting from an economist's perspective because they exploit the externalities and the lack of information. By reducing externalities and increasing information, there is an argument that they should actually make the markets more efficient. And we might ask whether we need more non-practising plaintiffs, hoovering up even more of the unlicensed patents and offering them for license? Or perhaps instead we need the legislature and courts to impose a regime that recognises explicitly that if the innovation market is to work efficiently, internalising the costs of the as-yet unlicensed patents has to be at a reasonable rate that provides the defendant with sufficient incentives. Recently proposed US legislation (Patent Reform Act of 2007, also known as HR 1908) is a powerful step in this direction: it proposes that the reasonable royalty is the economic value attributable to the patent's specific contribution. However, the costs of this kind of evaluation will clearly be considerable, founded as it is on a damages enquiry that is part of costly and complex litigation. And this kind of evaluation will be applied to only a small fraction of all the patents that might be infringed, so the fundamental problems of excessive externalities and information asymmetry remain.

Another legislative solution might be to impose a cumulative maximum royalty that is applicable to any product, irrespective of the number of patents allegedly infringed. This would greatly diminish the inefficient bargaining (in which one person's strategic behaviour is another person's naked greed) that accompanies most

patent licensing and litigation settlement negotiations. It would allow businesses to budget for patent royalties. It would require new mechanisms to fairly attribute revenue from multiple patent holders.

The concept of a cumulative royalty cap has been widely discussed—eg, in the context of a 5% cap on 3G wireless patents by Nokia.⁴ What this would mean in practice is that the maximum royalty that a vendor of 3G equipment would pay would be 5% of the ex-factory price. This is significant because as the law currently stands, if you had 20 entities, each seeking 2% royalties, the cumulative royalty would reach 40%—a completely non-sustainable level. The 5% cap level is intended to be sustainable, yet gives material revenue to the major patent holders whose patents are licensed. To date, the cumulative royalty concept has failed to gain sufficient traction since it is detrimental to too many private interests—the very participants that benefit from market failure because, through their own strategic behaviour, they can maximise their own private gains. Vested interests in maintaining market inefficiency are powerful, and it will take some visionary legislation to impose a new economic order. We doubt it will happen for some time. Perhaps the key driver will, in the long term, be the rise in the creative capability of Asian companies: once Chinese companies start out-spending and out-innovating their European and US counterparts, how long will it take Western governments to act on the compelling need to give access, at reasonable cost, to these innovations?

Market failure versus market solution?

It is in any event interesting to speculate about whether some private initiative can introduce market efficiency. New markets need new types of institution and, critically, new forms of abstraction. Personal skill and labour is abstracted into the idea of money: money is an abstract representation of skill and labour. It enables a liquid market in employment. Risk is abstracted into insurance: insurance costs are an abstract representation of risk that enables a liquid market in the sharing and trading of risk. Corporate performance and potential is abstracted into a company's shares: share value is an abstract representation of corporate performance and value that enables a liquid market in corporations. The concept of money had to be invented. The concept of insurance had to be invented. The concept of the company share had to be invented.

Yet if innovation is the key to the new economies, can it be meaningfully abstracted? At the moment, many patent transactions (acquisitions, licences, cross-licences) are really at the level of barter—ie, there is an exchange of value, but no money changes hands. We are, in essence, where society was before the invention of

money. Bartering is a very inefficient mechanism with high transaction costs; its value exchanges can seem to have an arbitrary quality. Bartering is much like today's patent transactions—whether long, drawn-out cross-licensing negotiations or equally time-consuming litigation.

So there is perhaps an opportunity for private interests to develop a market with real liquidity for something that stands as an abstraction for innovation—to invent the defining abstraction of innovation. This is on one level a peculiar proposition, and yet, as noted above, abstractions of skill and labour, risk and corporate potential are each defining attributes of our successful modern economies. They all had to be invented—often through a gradual and incremental process of evolution, yet nevertheless conjured into existence.

So exactly what the institutions and instruments of this new liquidity will be is the really engaging question. We doubt that they will evolve easily or rapidly or without friction. They may simply be logical step-wise developments of existing conventional licensing (whether bilateral, through standards-based licensing agents or through collection societies). Or they may be something far more radical, involving new kinds of tradeable instrument designed to give non-practising plaintiffs money, and to give practising defendants design freedom. But if we could look back at today 100 years hence, we believe that it would be apparent that we have already begun this journey, perhaps without fully realising it.

The second trend is perhaps paradoxical. Sharing innovations requires simple and clear rules regarding the protection of innovation. So we expect that IP laws will become more transparent, simple and predictable, with lower transaction costs or other costs associated with resolving uncertainty in the scope of legal rights. We expect also that the courts will continue to swing to a more even-handed approach, neither pro- nor anti-patent.

If the existing patent system is to drive liquidity in innovation and not be eclipsed by some new currency of innovation, we believe that government regulators and the judiciary will need to act in increasingly radical ways to regulate the markets to achieve economic efficiency. HR 1908 marks what could be the start of further radical reform. The cumulative royalty cap model is especially relevant in this context.

Finally, we expect increasing momentum in decentralised, open source-style collaborations. For many participants, this will be a low-cost, low-reward activity. Although most corporations do not follow a low-cost, low-reward model, it is the model that is

predominantly followed by the majority of ordinary people, who provide their time for relatively modest rewards. So the extension of this private model of behaviour to a more public sphere of collaboration should be seen as evolutionary rather than without precedent. But the social consequences can be significant and transformative—eg, as in Wikipedia and other 'Wiki'-style collaborations.

In some spheres, open source has provided technologically better solutions than those available from for-profit corporations—eg, the Apache open source web server has been the most widely used web server for more than a decade, despite Microsoft's efforts. More recently, in November 2007, Google announced the Android open source mobile phone platform.⁵ The hegemony of patents even in areas where they have been assumed critical, such as pharmaceuticals, is under scrutiny. For example, under proposed US legislation, The Medical Prize Innovation Act of 2007, the current patent regime would be replaced with a \$80 billion prize system. The objective is to create a separate market for pure innovation. In theory, this would vastly reduce the cost of drugs because they would then be made available to consumers at prices that reflect the economically efficient and generally low cost of production of generic products. The concept of prize-based innovation has a long and fascinating history, from the British government's 1714 Longitude Prize for a precise way of determining a ship's longitude (£6m in current value), to the recently awarded Ansari X Prize for the launch of a reusable manned spacecraft into space.

Conclusion

At the moment, there are no real institutions tasked with providing liquidity to a market in innovation. Instead, there are simply individual players seeking to maximise their return on a specific transaction—typically a patent owner seeking to maximise returns on a patent sale or licence, sometimes using litigation, often not.

The innovation market has yet to find its voice and its institutions. Once it does, we believe that it will transform the efficiency of technology innovation.

We will look back on the rise of the non-practising plaintiff, and its use of the complex and costly machinery of court litigation for monetisation will seem like a historical necessity at the time, because there was simply no better alternative. That better alternative will not develop on its own—it will, we expect, require governments to perceive a more acute threat to the proper functioning of the technology markets than has yet materialised. Realistically, we do not expect radical legislative intervention any time soon.

It is worthwhile reminding ourselves that patents are not meant exclusively to serve the private interests of patent holders, to allow them to maximise their gains at the expense of overall market efficiency. They are part of the complex and delicate equilibrium, in which overall market efficiency is the only rational objective. We may sometimes (understandably) lose sight of this basic context in our efforts to aggressively enforce, or resourcefully defend, the private interests of our clients. Occasionally, we might usefully recall the words of the 17th-century English Statute of Monopolies. Before the

1623 Statute, English monarchs had an unfettered discretion to award monopolies to whomever they pleased and for any duration. The Statute imposed a 21-year patent, solely for any 'Manner of new Manufacture', and only:

so they be not contrary to the Law, nor mischievous to the State, by Raising of the Prices of Commodities at home, or Hurt by Trade, or generally inconvenient.

Peter Langley and David Bottomley

¹ *NTP v. Research in Motion*, 418 F.3d 1282 (Fed. Cir. 2005).

² *Ungar v Sugg* (1899) 9 RPC at 117.

³ *eBay Inc v. MercExchange, L.L.C.* [1], 126 S. Ct. 1837 (2006).

⁴ See *The Register* (2002), 'Nokia Pushes for Flat-rate WCDMA Royalties', *Computerwire*, May 9th; http://www.theregister.co.uk/2002/05/09/nokia_pushes_for_flatrate_wcdma/.

⁶ See Google Press Centre (2007), 'Industry Leaders Announce Open Platform for Mobile Devices', November. http://www.google.com/intl/en/press/pressrel/20071105_mobile_open.html.

If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email d_holt@oxera.com

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