Choose freedom

Why solving the prisoner’s dilemma is the key to a successful future for IP deal making

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On April 5 2017 the High Court of Justice of England and Wales issued a ruling believed by many to be the strongest judicial signal yet that the global patent licensing industry must finally free itself from the prisoner’s dilemma dynamics that have constrained it and led to a congenital lack of transparency, flexibility and fairness in many sectors.

A classic in economic game theory, the prisoner’s dilemma holds that two rational entities acting in their own self-interest – but without adequate information or knowledge of each other’s plans – will inevitably betray each other and ensure a negative outcome for both. The key ingredient needed for the prisoner’s dilemma to work its destructive magic is a lack of transparency between the parties involved.

On the surface, the High Court case Unwired Planet International v Huawei Technologies Co, Ltd involved a simple claim of alleged infringement of Unwired’s standard-essential cellular patents. The High Court ruled that product maker Huawei had infringed Unwired Planet’s rights, determined a worldwide fair, reasonable and non-discriminatory (FRAND) royalty rate which should apply to the patents in question and stated that Unwired Planet’s rights, determined a worldwide fair, reasonable and non-discriminatory (FRAND) royalty rate which should apply to the patents in question and stated that Unwired Planet would be entitled to an injunction should Huawei not agree to take a licence on that basis.

However, in his decision Justice Birss recognised that this one patent lawsuit is representative of a larger complex of systemic problems and unproductive behaviours within the patent licensing sector, especially in wireless, that are engendered by the prisoner’s dilemma. He signalled that when it comes to FRAND licensing, at least, the courts in England and Wales are ready to start dealing with them holistically.

He chose, for example, to set a worldwide royalty rate for an entire portfolio of standard-essential patents (SEPs), recognising that a global patent licence was the essence of the dispute between the parties. He apparently felt that a typically narrow decision focusing on only a specific patent or two would do little to curb either extortionist behaviour by overly aggressive licensors or obstructionist behaviour by recalcitrant licensees.

The judge also struck a blow for transparency, ruling that in the United Kingdom companies can no longer hide behind confidential or so-called ‘without-prejudice’ offers (ie, those not admissible in court) and call their licensing practices FRAND. “FRAND characterises the terms of a licence, but also refers to the process by which a licence is negotiated,” Birss ruled, noting that a product maker that “wishes to take advantage of the patentee’s FRAND obligation must themselves negotiate in a FRAND manner”.

Like the European Court of Justice (ECJ) in Huawei v ZTE before it, the Unwired court spoke to the defective process of patent licensing. In this, both courts mirrored the thinking of growing numbers of global IP deal makers, who have increasingly come to believe that the prisoner’s dilemma rules which distort patent licensing contain within them the seeds of a larger market failure.

As Allen Lo, Google’s deputy general counsel for patents and one of the industry’s most influential figures on patent issues, put it: “The behaviour of many licensors – and some licensees, too – reflects a mistaken belief that making unreasonable demands will somehow lead to reasonable results. This approach does not reflect the reality that any individual patent dispute is only one of thousands in a given year. Both licensors and licensees suffer when there is a lack of ground rules and industry norms ensuring that royalty negotiations take place within reasonable bounds.”

Towards a new approach
It is time to openly address the lack of transparency and fairness that is so prevalent in many areas of our industry. And we should speak honestly to each other, because there is much more at stake than simply the strategic fortunes of our individual companies. We have large and complex challenges to meet in a global economy in which powerful new players are emerging in markets where the value of IP rights is unevenly distributed. At the same time, thanks to a flurry of headlines about patent troll abuses and corporate patent wars, public confidence in the patent system is at a low ebb. This threatens the continued ability of patent licensing to fulfil its social mission of incentivising and rewarding innovation and enabling it to be incorporated into new products, services and medical treatments which benefit all society.
Hold-up
To start, let us first talk about patent hold-ups before turning to licensing hold-outs. Because of the lack of transparency and dearth of predictable pricing norms in a number of patent licensing sectors today, many patent owners feel compelled to engage in strategic gamesmanship and over-reach in order to advance their demands for compensation. For example, in the wireless sector, the owner of one LTE SEP – whose validity, quality and value are hardly transparent to the licensee – might demand 2% of the price of a smartphone, arguing that but for its ‘ground-breaking’ patent, the licensee could not practise the standard. This is despite the fact that many thousands of other SEP declarations have been made to the European Telecommunications Standards Institute’s (ETSI) LTE standard. It is not difficult to imagine why product makers fear they would quickly go out of business were they to meet such demands.

Furthermore, if a prospective licensee demonstrates a willingness to conduct genuine negotiations with certain non-practising entities (NPEs), it may be seen as an easy mark and immediately be targeted by more such patent owners. With so many patent demands coming at them – some with highly speculative claims – licensees feel compelled to adopt a policy of generalised intransigence simply to avoid becoming a magnet for assertions of dubious quality. Ironically, the only patent owners likely to get a licensee’s prompt attention are those that litigate early and aggressively – which naturally only encourages litigants to become even more aggressive and litigious.

Hold-out
But what about hold-out? I doubt there is any honest licensee which, in a private setting, would deny that a policy of delay and obstruction has become the modus operandi of many product makers today. To be sure, this licensee might note – with some justice – that this is partly the result of a decade or two of previous over-reaching by certain gold-digging patent trolls.

But don’t kid a kidder. Since the US Supreme Court ruling in eBay v. MercExchange – which I supported in a 2006 amicus brief when I served as Yahoo’s head of intellectual property – the relative negotiating strength of patent owners versus product makers has been upended. Add multiple rounds of patent reform since then, some far-reaching Supreme Court decisions such as Alice v. CLS Bank and Mayo Collaborative Services v. Prometheus Labs, and an inter partes review process in the United States that former Federal Circuit Chief Judge Randall Rader has likened to a “patent death squad”, and the result is that even the most legitimate non-practising inventor-patentee has few realistic chances of ever being compensated for his or her innovation today. Were Thomas Edison alive, he would likely find it very difficult to get his patents licensed.

The whole system is out of whack. In the US courts, eBay has left very little room for NPEs to obtain injunctions. And given the broad-spectrum reluctance of product makers even to talk to patent owners, just about the only tools many patent owners have left for individually pursuing fair compensation are strategic gamesmanship and aggressive pricing demands. This in turn fuels even greater resistance (and legislative push-back) from big corporations, which have never exactly been thrilled to write cheques to patentees such as intermittent windshield wiper inventor Robert Kearns, whose 12-year legal battle with Ford was the subject of the Hollywood movie Flash of Genius.

This never-ending cycle of hold-up and hold-out in so many sectors of our industry is driven by the lack of three normalising forces: transparency, flexibility and fairness – in patent quality, valuation models and the licensing process itself. This is what generates these prisoner’s dilemma behaviours, which threaten to break licensing’s virtuous circle of innovation leading to commercialisation, which in turn funds more innovation.

Escape route
So how do we, as licensors and licensees, escape the prisoner’s dilemma? How do we reduce the incentives for strategic gamesmanship and the incidence of hold-up and hold-out? How do we respond fairly and flexibly to the unique licensing challenges faced by emerging market and small and medium-sized enterprise (SME) product makers? How do we reduce our dependence on a court-mediated dispute resolution process which is shockingly expensive and often unpredictable? Last but not least, how do we restore trust in patents as the embodiment of innovation rather than a license to sue, and rebuild public confidence in the patent system as the most effective mechanism for promoting technological progress and economic growth ever invented?

These are ambitious goals. But since it is an axiom of economics that markets function better when there is adequate information, elastic competition and impartial ground rules for both buyers and sellers, I believe that greater transparency, flexibility and fairness will help to free the patent licensing industry from the stranglehold of the prisoner’s dilemma that is so destructive in areas such as wireless. This will help to properly balance the interests of willing buyers and sellers and enable the market to expedite the more productive commercialisation of patented innovations.

Transparency
With greater transparency as our starting point, let us focus on FRAND licensing, where licensors and licensees at least have some acknowledged commitments.

“The lack of transparency in FRAND licensing is often a hurdle to getting a deal done,” argues Michael A Jacobs of Morrison & Foerster, who has litigated a variety of prominent patent cases. “Licensees don’t want to overpay, so in trying to determine whether licence terms are FRAND, they often want to see lots of information about other licences to the same technology. That can be hard to obtain outside litigation. Licensees seeking to fashion FRAND offers don’t want to undercharge, so they too could benefit from a better view of the market.”

So what can be done to make FRAND licensing more transparent?
As the Unwired court appears to have recognised, it is important to have transparency in pricing as well as transparency in process.

In terms of pricing, the first step is for licensors to present their pricing honestly and openly. For the reasons already noted, there is some perceived risk in
this approach. Many licensees will view these prices as merely an opening bid and attempt to negotiate downwards from there. However, holding firm to fair and open pricing is ultimately better for licensors than the losing game of making outrageous demands. That is because, thanks to the reduced leverage available to many licensors in today’s weakened patent environment, sophisticated licensees no longer feel particularly threatened by outrageous demands. For their part, licensees must reciprocate by being willing to publicly support pricing models that are fair and transparent – something they rarely do today.

As former IBM and Microsoft IP chief Marshall Phelps explains, when licensors offer fair, logical and transparent pricing structures, it creates the conditions for honest negotiations, even if the final results of any negotiation may vary from licensee to licensee. “IBM had zero licensing success until we implemented a logical and public pricing model that was perceived as fair by licensees – and that treated each licensee equally,” Phelps recalls.

However, pricing transparency should also include transparency in the methodology used to arrive at the ultimate price of a licence. Given the unmanageably large number of LTE patents that are declared essential, it would be helpful for the industry to support a fair approach to the value of the relevant patent stack as a whole. This assumes, of course, that we can agree to a reasonable mechanism for determining how many patents are truly essential to the LTE standard and then delineate a fair average per-patent price as a result where also at times taking into account the technological significance of particular patents when appropriate.

I am not proposing wasting millions of dollars on litigation-grade patent analysis and arbitration of every patent claimed to be standard essential. Rather, I think we need to find a common-sense way to delineate reasonable bounds to the LTE patent stack and accept a realistic count of the LTE patents which phone manufacturers truly need to practise in their handsets.

Currently, the 49 LTE technical specifications relevant to Via’s patent pool (the Via 49) include a very large subset of the 160,000-plus declarations made for all ETSI standards. But these are self-declared claims by companies, each promoting its own products and services, with no real assurance that any declaration accurately represents an essential LTE handset component. These also include declarations that are no longer active patents, may never become patents and have no relevance to LTE, as it is actually practised by handset makers in the real world.

**Funnel factor**

One method which has been discussed by industry participants outside of Via (no claim of inventorship here) is to progressively filter this unwieldy mass of SEP declarations to screen out patents that are inapplicable for various reasons. That way, we can eliminate patents which are not truly relevant to the LTE standard actually used in handsets or the core network (sometimes referred to as ‘TrueLTE’). This winnowing process works like a funnel (see Figure 1).

One proposed implementation of this winnowing process is as follows. First, remove from the 160,000-plus ETSI declarations all patents which are not part of the Via 49 technical standards, as well as all duplications, expired patents and applications (the latter because these might never become issued patents). This leaves 55,606 patents. Second, consolidate these into their patent families, since patent owners often declare multiple patents from the same family. With 5,915 active patent families remaining, next remove any patent families lacking a US, European or Patent Cooperation Treaty family member, because any family without at least one counterpart in one of these major jurisdictions is not likely to be considered truly valuable by most companies. Many argue we should also remove any declarations made after the LTE Release 8 cut-off date in 2008, since those have not been implemented in any significant way as feature sets in phones. Finally, exclude all patents which have base station or infrastructure claims only, with none directed to handsets, except where there is the possibility that such patents may be indirectly infringed.

**Getting a price**

We now have one real-world estimate of the number of LTE handset patents that might be truly essential to handset makers – roughly 2,071 – a number which could be further reduced by independent neutral evaluation for essentiality. It thus becomes much easier to develop a transparent pricing model for patents in what we call the ‘TrueLTE’ stack – one that has a reasonable chance of being supported by licensors and licensees.

To be sure, the technical value of any specific patent may be significantly greater than the average price of patents in the stack. However, to determine the price for the entire royalty stack in consensual negotiations for portfolio licenses, the best approach is not to argue over the value of individual patents, but to assess the value of the total LTE stack in the average selling price of a phone.

Reasonable people might disagree on the best way to do this. Some might suggest that the value of the LTE stack be based upon the value of the chips, modems or...
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other components. Others would propose that we base LTE value on the rates used in relevant pre-existing licences – and indeed, that was the approach taken by Birss at the UK High Court.

Looking at the comparable prices from both Ericsson and Huawei, he set the total value of a phone’s cellular component at 8.8% of its $324 average selling price, or $28.53. However, Birss went on to note that only two-thirds of that represents the LTE component, as opposed to 2G and 3G cellular capability. Thus, he valued the LTE component in modern phones at roughly $18 to $19.

Regardless of whether one values the total LTE stack at $18 to $19 or some other reasonable number, the next step is to calculate any SEP holder’s share of the total relevant LTE SEPs. For example, since the Via pool currently represents roughly 14% of total TrueLTE SEPs – and that share is growing – Birss’s methodology indicates that Via’s current rate of $2.10 per unit for our whole portfolio is rather low and getting lower.

Obviously, in any litigation in which practicalities limit the number of patents in suit, patentees should be entitled to prove that the contribution of the patents in suit to the technology or accused products far exceeds the value of the “average” patent in a royalty stack analysis. However, in consensual negotiations for LTE portfolio licences, the key is to determine a fair price for the total stack of relevant LTE SEPs. This will minimise gamesmanship and friction in FRAND licensing.

Google’s Lo agrees. “You can’t have a situation where the price for comparable LTE SEPs varies wildly from patent owner to patent owner,” he explains. “Manufacturers cannot operate in an environment where every LTE SEP holder asks for some percentage of the phone’s total price. Given the number of SEP holders out there, the royalties would eventually not only exhaust the margin in the phones, but exceed the cost of the entire phone. The industry would benefit from a rational mechanism to determine which patents are truly essential and to what degree, then value the entire stack and finally charge royalties based on each SEP owner’s share of the total LTE stack.”

Adds Boris Teksler, CEO of Conversant who has held previous leadership positions at Unwired Planet, Technicolor and Apple: “Via has endorsed a licensing framework and pricing model for LTE that I believe strikes a reasonable balance between licensors and licensees. This transparent approach will help usher in an era of increased market efficiency and reduce the volume of litigation that has historically plagued the handset industry.”

It is not enough, however, to merely talk about transparency and fairness. Words must be matched by deeds. Unfortunately, some collective licensing entities use buzzwords such as ‘transparency’ and ‘trust’, but then refuse to publish their actual rates. They also make claims about the size of their wireless portfolio without subjecting their patents to neutral evaluation through a fair and transparent process. Licensees are therefore justified in questioning such claims and should insist upon a verifiable track record of transparency.

The larger point here is that if we give the market the tools it needs – greater transparency and impartial ground rules for both buyers and sellers – then the market itself will be better able to set a rational economic price for the LTE stack and allow for appropriate adjustments to that price over time.

FIGURE 1. The SEP funnel

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“Licensors seeking to fashion FRAND offers don’t want to undercharge, so they too could benefit from a better view of the market”
More open and public offers
In addition to coming to a reasonable method of determining the true size and value of the total LTE SEP stack, it is vital to add more transparency to the licensing process itself in order to reduce cost, friction and litigiousness in the wireless sector. One way to do this is to make confidential without-prejudice offers inadmissible as FRAND, as the High Court in London did. Regardless of whether other courts adopt this approach, making the pricing of other licences public would also improve transparency.

Another way is to support more multi-party licensing solutions such as patent pools, which are inherently more transparent. RPX’s multi-party solution, for example, mitigated the cost and friction in the defensive licensing of scattered so-called ‘troll’-owned patents when it was launched. I cannot speak to the economics of RPX’s multi-party solution; but regarding Via’s AAC Audio Pool, academic research published last year by Professors Robert P Merges and Michael Mattioli found that the 900 licensees to Via’s pool saved more than $600 million compared to what they likely would have spent had they tried to bilaterally license those same standard-essential audio components from each individual rights holder.

For licensees, patent pools such as Via’s offer one-stop shopping for essential patents from many licensors simultaneously – curated by an independent evaluator in a transparent submission process and based on publicly available pricing. They also tend to reduce the opportunities for any one rights holder to hold up a product maker for exorbitant fees or the chances that litigation may result.

Licensors, meanwhile, receive appropriate compensation for their innovations without having to engage in risky high-cost negotiations with multiple product makers, at least some of which may hold out until a lawsuit is filed which demonstrates the patent owner’s seriousness.

However, transparency is only one of the three keys we need to unlock the industry from the chains of the prisoner’s dilemma. The second is flexibility.

Flexibility
IP rights regimes vary significantly from region to region and there are differences in the enforceability and value of patents in different regions around the world. For example, patent value can vary significantly between mature economies such as those in the United States, Europe and Japan, and emerging economies such as China and India. This is a reflection of the inexorable law of uneven development (shorn of its Marxist origins).

Other reflections of this law include the differences in market size, product set, margins and competitive dynamics of large companies versus SMEs. This is the real world and it can be a source of friction in FRAND licensing.

For a long time, many licensors have insisted upon a one-size-fits-all approach to rates and deal terms for product makers of all sizes in all markets. Although this attitude may have once been appropriate when the patent world consisted of a relatively small elite club of US, European and Japanese companies, it belongs to a bygone era. Today, it represents a mechanistic interpretation of what it means to be FRAND, and continued adherence to it is unsuited to a modern IP landscape in which emerging market start-up businesses can and do rise from obscurity to become global powerhouses in just a few years.

Consider Xiaomi, for example – one of the more successful companies to emerge from China’s recent entrepreneurial boom. Seven years ago, it did not even exist. Today, Xiaomi is the fifth largest smartphone maker in the world and sells more phones in China (70 million) than Apple. Until recently, it was also the most valuable start-up in the world (Uber now has that crown).

For Chinese companies such as Xiaomi, one of the biggest hurdles to global expansion is securing the IP rights to the components used in their products – including the patented wireless and digital audio components in smartphones. Without these, Xiaomi could find its plans to sell phones in the United States and other
new markets stymied by patent infringement lawsuits, with its products potentially even barred from some.

Xiaomi's challenge is that it is constrained by the tighter profit margins which make its phones so affordable: only $285 for its most popular model or less than half the cost of an iPhone. So even though it wants the operating freedom which comes from securing IP rights, Xiaomi's margins leave the company only a small buffer with which to absorb patent royalty costs.

That is where flexibility comes in. Via licenses the rights to the core digital audio technologies developed by 10 global technology leaders which participate in its AAC pool. Pool licences, as noted previously, have been accepted by well over 900 manufacturers – but until recently, not a single large smartphone maker with sales primarily within China.

Therefore, much was at stake when I sat down with Paul Lin, Xiaomi's head of IP strategy, to discuss an AAC licence. To help us succeed, we each embraced flexibility, but also set some firm ground rules.

Our first ground rule was: do not impugn motives. Via understood that Xiaomi was not trying to steal US intellectual property. It was simply looking for deal terms and pricing structures which fairly reflect the more challenging economic realities of emerging markets such as China, where profit margins, product selling prices and the value and enforceability of patents are all much lower than they are in mature economies such as the United States.

For its part, Xiaomi recognised that western rights holders such as Via are not looking to extract some sort of tribute from the Chinese, like the British did during the opium wars of the 19th century. These patent owners simply want to be compensated fairly for the component technologies which they developed at great expense and which are now being used in Chinese products.

However, there was also an actionable component to this ground rule about not impugning each other’s motives. While Via recognised that China’s path to full IP compliance would need to be gradual, Xiaomi acknowledged the need to take definitive steps now.

Progress, not perfection
Our second and even more important ground rule was: seek progress, not perfection. It makes perfect sense for Chinese companies to pursue a gradual path to IP compliance. After all, during the early industrialisation of the United States, the country was a notorious IP pirate of UK and French copyrights. Only after US authors and publishers themselves began demanding stronger copyright protections to prevent their own creative works from being stolen did the United States finally start to comply with international copyright norms.

China is today following a similar path to IP compliance. As Chinese industry has become more R&D intensive, Chinese businesses themselves have begun to demand stronger IP protections precisely to safeguard their own investments in R&D. China is now rapidly strengthening its IP rights regime.

This twin approach — do not impugn motives and seek progress, not perfection — enabled Xiaomi and Via to reach a solution which was transparent, flexible and fair to both sides, as you will see shortly.

Fairness
Fairness is the third key to liberating patent licensing from the prisoner’s dilemma. To be sure, there is always a subjective element in deciding what is and what is not fair. However, when combined with the other two keys of flexibility and transparency, ‘fairness’ in this context implies an ability to step into the other party’s shoes for a moment and see the world, clearly and honestly, through its eyes. Fairness, therefore, is not merely in the eye of the beholder. It should demonstrate equity, even-handedness and integrity.

Yet the fact remains that, until recently, most western rights holders insisted that licensing on FRAND terms could mean only charging the same rate for patent rights in every region, whether China or the United States – even though, among other differences, product margins and patent values are much lower in China.

Is that still fair today? The price of every other product, from automobiles to shoes, varies widely from region to region depending on component prices, the cost of labour and other local factors. Why should patent rights be exempt from local pricing influences?

As Xiaomi’s Lin observed: “When people sell Chinese patents, these always sell at a discount compared to US patents. But then, when they try to license their China patents for the China market, they don’t discount the price. So you have to ask yourself, ‘Is that really fair?’ It seems to me that if there is a difference in the selling price of patents in China and the United States, that difference should be reflected in the licensing rates, too.”

We listened to the arguments made by Xiaomi and other Chinese companies, and devised an optional alternative way to license on a FRAND basis which reflected the economic realities within an emerging market such as China.

Via’s AAC pool now offers an optional alternative regional royalty structure as an alternative to its standard worldwide rate. This yields a discount of up to 35% for products sold in emerging markets such as China and India, compared to the standard royalty rate for products sold in developed markets such as the United States, Europe and Japan. Assuming that
Publicly support the development of fair and transparent pricing models which licensors and licensees can both get behind. The current status quo in many licensing sectors – in which each side acts as the so-called ‘party of no’ to the other – is unsustainable. In the notoriously challenging wireless arena, pare down the 55,000-plus LTE standard-essential patent (SEP) declarations to the roughly 2,071 which truly reflect the LTE standard as actually practised by handset makers in the real world. Then work towards establishing a market value to that stack – many observers suggest a price of between $10 to $20 of the $324 average selling price of a current phone, but the market will ultimately decide the right price – and charge royalties based on each SEP owner’s share of the total LTE stack, rather than on the subjectively asserted value of any single patent or a small subset of patents.

Free market cannot do it all
There will be those who say that the hidden hand of the free market decides all, and that no conscious effort to cultivate greater transparency, flexibility and fairness in our business is likely to be effective in reducing the incidence of hold-up or hold-out, or in making many areas of patent licensing any less opaque, costly or litigious.

However, history offers numerous examples of industries in which economic players have developed voluntary codes of behaviour which have mitigated the threat from bad actors and strengthened the industry. In the late 1970s and early 1980s in the United States, for example, banks and mortgage lenders were threatened with a wave of state and federal laws barring so-called ‘red-lining’ (i.e., the denial of loans to minority applicants). The industry’s brand was a shambles. But a consensus developed around a voluntary standard of non-discriminatory behaviour. And despite the later weakening of lending standards which contributed to the 2008 financial crisis, mortgage lending is a healthier business overall as a result.

But by itself, the free market cannot do all. It does not contain the sum total of human knowledge and wisdom; nor does it encompass and reflect the full range of human endeavours, needs and aspirations. That is why, for millennia, people have invented governments and other forms of collective action in the first place – so that citizens can act together, consciously, to shape the spontaneous economic and natural processes going on around them.

Indeed, that is why we created our national patent systems – in order to “add the fuel of interest to the fire of genius” and create a more prosperous and productive future for all.

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