

## Privateers and trolls join the global patent wars; can competition authorities disarm them?

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**On Halloween of 2013, patent assertion company Rockstar, owner of one of the largest patent portfolios in the world,<sup>2</sup> filed patent law suits against seven mobile phone makers and Google in the Texas 'rocket docket'.<sup>3</sup> This heralded an escalation in the mobile patent world war raging since 2010.**

**This 'Halloween Attack' is symptomatic of an increasing problem: opportunistic exploitation of patents by Patent Assertion Entities ('PAEs', or less politely, 'trolls'), and the strategic use of such PAEs by firms to hamper their rivals. The war stories from the mobile phone sector are interesting as examples of a competitive game, but even more as a harbinger of troubles likely to arise also in other sectors if competition authorities, courts, or legislatures do not stop them. This article briefly describes the battlefield, the combatants and their strategy, and the events to date, concluding with a discussion of relevant competition law and possible solutions.**

### The theatre of war

To understand the dynamics of the patent war, it is important to understand that the ICT sector, and mobile phones and tablets in particular, are vulnerable to IP blackmail.

- IT systems are technically complex, consisting of many complementary hardware and software components made by different suppliers. Assert a patent on a single component, or an interoperability protocol, and you can block an entire product.
- Phones and computers interoperate in networks, where the usefulness of a product increases the more other people use the same technology. This network effect leads to lock-in: Once every producer uses a particular standard or interoperability technology, switching becomes difficult. Even if a design-around was easy and cheap before lock-in, it may be prohibitively expensive afterwards. No one wants a phone, however fashionable, that does not work on a network. Assert a patent on

a component that is subject to network effects, and you can threaten producers with catastrophic loss.

- Patents proliferate in the ICT sector. This is partially due to patent mining and strategic patenting – firms creating dense thickets of overlapping patent claims covering and surrounding a product to block rivals. As patent offices are overwhelmed by applications in new, fast-moving and complex technology areas, some think they grant patents without adequate review, leading to lower patent quality.<sup>4</sup> Yet, in a portfolio, volume makes up for weakness. Patents are presumed valid, and challenging patents is costly and time-consuming. More important, if one patent is annulled or found not infringed, patentees will have others. Litigation becomes like a fight against the Hydra: chop off one head and two more grow. "When you're paying lawyers between \$10,000 to \$15,000 per patent to drill down and research each patent, it's usually less expensive to cut a licensing deal. Anything over 200, nobody's talking about merits".<sup>5</sup>
- The risk of attack and the exposure increases exponentially with fragmentation of patent ownership. Gone are the days that one person owned one patent covering one product. Technological innovation is shifting away from large corporations to a diverse array of companies, universities, and even individuals.<sup>6</sup> Worse: If until recently, fragmentation resulted mainly from cooperative and complementary innovation, firms have now taken to spinning off portions of their patent portfolios deliberately to different PAEs.

The combination of system complexity, network effects, patent proliferation and fragmentation of patent ownership

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2 See [www.ip-rockstar.com/](http://www.ip-rockstar.com/). See also McMillan, *How Apple and Microsoft Armed 4,000 Patent Warheads*, Wired (May 21, 2012), [www.wired.com/wiredenterprise/2012/05/rockstar/all/1](http://www.wired.com/wiredenterprise/2012/05/rockstar/all/1).

3 See, Robert McMillan, *Apple and Microsoft's Patent Troll sues Google over Android*, Wired (November 1, 2013), available at [www.wired.com/wiredenterprise/2013/11/rockstar-2/](http://www.wired.com/wiredenterprise/2013/11/rockstar-2/). For Google's counteraction, see [www.scribd.com/doc/193573584/Google-Dec-Action-vs-Rockstar](http://www.scribd.com/doc/193573584/Google-Dec-Action-vs-Rockstar).

4 OECD Science, Technology and Industry Scoreboard 2011, at [www.oecd.org/sti/sci-tech/48712591.pdf](http://www.oecd.org/sti/sci-tech/48712591.pdf) ('an average 20% decline in patent quality'.) But see 'What is the Probability of Receiving a US Patent?', Carley, Hegde, and Marco, 2014.

5 McMillan, Wired, above. *Charter et al v Rockstar*, Complaint, January 17, 2014, Case 1:14-cv-00055-UNA, <http://ia600801.us.archive.org/30/items/gov.uscourts.ded.54035/gov.uscourts.ded.54035.1.0.pdf> ("While Rockstar's letters did accuse Plaintiffs of infringing specific patents within its portfolio, Rockstar was quick to explain that those named patents were provided by way of example, and that each Plaintiff should 'keep in mind that the [named] patents are part of a much larger portfolio'. ... In addition to demanding exorbitant licensing fees, Rockstar also used the sheer size of its portfolio to preclude accused infringers from substantively evaluating the merits of Rockstar's infringement allegations").

6 Phelps and Kline, *Burning The Ships; Intellectual Property and the Transformation of Microsoft*, 2009.

creates the risk of IP gridlock<sup>7</sup> and hold-up,<sup>8</sup> and an ever-higher royalty stack. In theory, each patent owner may charge a royalty equal to the value of its innovation – the increased profit that licensees can derive from the selected technology over and above what they could have derived from the next-best alternative.<sup>9</sup> But in practice, *each* individual patentee seeking an injunction on a mere *component*, may block the *entire* downstream product, and force the user to pay a royalty up to switching costs or profits derived from the entire product.<sup>10</sup> As economist Antoine Cournot realized 150 years ago, the sum of these fees is so high that it leads to inefficient and undesirable outcomes both for consumers and suppliers. Cournot discovered that monopolist producers of complementary products each tend to price their component at monopoly level, resulting in an aggregate cost for downstream producers of complex products that is above the level that a single monopolist would have charged, thus reducing output and profits. Everyone would be better off with a single licensor (for instance, a patent pool), charging a single royalty.<sup>11</sup> With fragmented ownership of patent portfolios, manufacturers and innovators face a veritable minefield.

## Opening hostilities

Until the 2000's, the mobile sector experienced détente and concentrated on 'coopetition'.<sup>12</sup> State telecom monopolies did not compete outside their own territories and had no problems cross-licensing technologies royalty-free or on fair, reasonable and non-discriminatory ('FRAND') terms, or

tolerating unlicensed use so long as they were left alone too. After liberalization, manufacturers continued this practice, since cross licensing is an efficient way to clear blocking patent positions.

While first signs of opportunism appeared earlier, the peace ended when HTC introduced the first Android phone in 2008. Apple's Steve Jobs was furious, accusing Android of 'using our ideas'.<sup>13</sup> He declared global 'thermonuclear war'.<sup>14</sup> The opening salvo followed in March 2010, when Apple sued HTC,<sup>15</sup> followed by the infamous 1 billion dollar litigation against Samsung in April 2011.<sup>16</sup> Apple's strategy is to seek injunctions everywhere.<sup>17</sup> A WIPO study found that 'Apple has a uniquely aggressive litigation history when compared to the rest of the market leaders...'<sup>18</sup>

Apple was not alone to exploit patents. Mobile devices are beginning to replace PCs, and thus threaten Windows.<sup>19</sup> Since the Windows Phone platform is not enjoying great success, Microsoft turned to patents. But with fresh memories of painful antitrust litigation,<sup>20</sup> Microsoft decided against injunctions, and (in Steve Ballmer's words) sought to show that 'Android is not free'.<sup>21</sup> Threatening litigation, Microsoft convinced almost all Android OEMs to take 'Android licenses'.<sup>22</sup> Microsoft charges \$5-\$15, even more than the royalty for Microsoft's entire Windows Phone OS (a practice called 'price squeezing').<sup>23</sup> Microsoft's strategy is perfectly

7 Heller, *The Gridlock Economy – How Too Much ownership Wrecks Markets, Stops Innovation, and Costs Lives*, 2008.

8 See, e.g., *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 310 (3d Cir. 2007), III.A.2.b.: ("[c]ursief[Although a patent confers a lawful monopoly over the claimed invention [...] its value is limited when alternative technologies exist [...]] That value becomes significantly enhanced, however, after the patent is incorporated in a standard [...] Firms may become locked in to a standard requiring the use of a competitor's patented technology. The patent holder's IPRs, if unconstrained, may permit it to demand supra-competitive royalties.]]") See also U.S. FTC Report, "The Evolving IP Marketplace: Aligning Patent Notice and Remedies With Competition", March 2011. ("Patent hold-up can overcompensate patentees, raise prices to consumers who lose the benefits of competition among technologies, and deter innovation by manufacturers facing the risk of hold-up.")

9 FTC "The Evolving IP Marketplace", above, p. 22-23 ("the incremental value of the patented invention over the next-best alternative establishes the maximum amount that a willing licensee would pay in a hypothetical negotiation... To prevent damage awards based on switching costs, courts should set the hypothetical negotiation at an early stage of product development, when the infringer is making design decisions and before it has sunk costs into using the patented technology.")

10 *Commission v. Microsoft Corp.*, Case T-167/08, 27 June 2012, para 29 ff, contrasting innovative value with 'strategic value' stemming from market power.

11 Lemley and Shapiro, "Patent Holdup and Royalty Stacking," (2007) *Texas Law Review*, Vol. 85:1991-2049, at <http://faculty.haas.berkeley.edu/SHA-PIRO/stacking.pdf>; Shapiro, "Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting", May 2000, <http://ideas.repec.org/p/cla/levarc/12224700000000539.html>; Buchanan and Yoon, 'Symmetric Tragedies: Commons and Anticommons', *Journal of Law and Economics* 2000, 43(1), 1–14.

12 'Coopetition' is a contraction of 'cooperation' (between suppliers of complements needed to create complex products) and 'competition' (to gain a large share of demand of the complex product); Brandenburger and Nalebuff, *Coopetition*, 1997.

13 Lee, *If Android is a 'stolen product,' then so was the iPhone*, *Ars Technica* (Feb. 23, 2012), at <http://arstechnica.com/tech-policy/news/2012/02/if-android-is-a-stolen-product-then-so-was-the-iphone.ars>.

14 BBC (October 21, 2011), "Steve Jobs vowed to 'destroy' Android" (quoting Isaacson, *Steve Jobs: The Exclusive Biography* (2011)).

15 Patel (March 2, 2010), "Apple specifically going after Android in HTC lawsuit", *engadget*.

16 *Apple v. Samsung*, 2011, USA, District Court, N.D. California (Case No. 1:2011 cv01846); see overview in Patentprogress [www.patentprogress.org/cases/apple-v-samsung-n-d-cal-ij](http://www.patentprogress.org/cases/apple-v-samsung-n-d-cal-ij).

17 Gödde, *Android Is Patently Ill. Two Strains of IP Disease that May Soon Derail Google's OS*, *UnwiredView* (Oct. 18, 2011), [www.unwiredview.com/2011/10/18/android-is-patently-ill-two-strains-of-ip-disease-that-may-soon-derail-google%E2%80%99s-os/](http://www.unwiredview.com/2011/10/18/android-is-patently-ill-two-strains-of-ip-disease-that-may-soon-derail-google%E2%80%99s-os/).

18 Fordham University CLIP Report for WIPO, December 2012, *The Impact of the Acquisition and Use of Patents on the Smartphone Industry*. ("Apple has filed more lawsuits than other market share leaders. ... patent infringement litigation saw a substantial increase after Apple's broad patent litigation was filed in 2011. Apple's aggressive litigation posture may be spurring litigation throughout the market.")

19 Reuters, 'We Are in a Post-PC World': Former Microsoft Visionary Writes Off Home Computer, (March 9, 2012), [www.smh.com.au/digital-life/hometech/we-are-in-a-postpc-world-former-microsoft-visionary-writes-off-home-computer-20120309-1uo0t.html](http://www.smh.com.au/digital-life/hometech/we-are-in-a-postpc-world-former-microsoft-visionary-writes-off-home-computer-20120309-1uo0t.html).

20 Phelps, *Burning the Ships*, above.

21 Wingfield, *Ballmer Aims to Overcome Mobile Missteps*, *Wall Street Journal* (October 3, 2010), <http://online.wsj.com/article/SB10001424052748703466104575529861668829040.html>.

22 Gutierrez, *With ZTE, Most Major Android Makers Choose Licensing*, Microsoft on the Issues (Apr. 23, 2013), [http://blogs.technet.com/b/microsoft\\_on\\_the\\_issues/archive/2013/04/23/with-zte-all-but-two-major-android-makers-choose-licensing.aspx](http://blogs.technet.com/b/microsoft_on_the_issues/archive/2013/04/23/with-zte-all-but-two-major-android-makers-choose-licensing.aspx).

23 Groklaw, *Barnes & Noble Exposes Microsoft's 'Trivial' Patents and Strategy Against Android*, (Nov. 13, 2011), [www.groklaw.net/articlebasic.php?story=2011111122291296](http://www.groklaw.net/articlebasic.php?story=2011111122291296).

hedged: if it succeeds, Android is taxed to death. If it fails, Microsoft will collect billions anyway.<sup>24</sup>

### The arms' race

The opening salvos triggered a patent arm's race. Google, Android's sponsor, had few patents, and realized it needed to buy patents to support Android OEMs. It hoped the risk of 'mutually assured destruction' would restore peaceful co-existence or cross-licensing. The resulting absence or reduction of royalties would reduce marginal costs of production which in turn would reduce prices for everyone, expanding demand.

When Novell's and Nortel's patent portfolios came on the market following the financial crisis, however, Microsoft and Apple took pre-emptive steps. They teamed up with competitors in the CPTN Consortium to purchase the 882 Novell patents for \$ 450 million.<sup>25</sup> The US and German anti-trust authorities prevented Microsoft from using these patents offensively against Linux,<sup>26</sup> but the effect was to keep them out of Google's hands, and thus maintain the imbalance of power that had allowed the patent war to break out.

A second attempt at patent balance failed when Apple and Microsoft banded together in the Rockstar Consortium, paying \$ 4.5 billion for Nortel's 6,000-patent portfolio to stop Google buying them.<sup>27</sup> Microsoft's participation was surprising, since it already had a worldwide, perpetual, free licence to all Nortel's patents and had no defensive reason to buy this nuclear arsenal.<sup>28</sup>

Google was eventually able to buy Motorola's patent portfolio. Microsoft and Apple complained that Google would abuse Motorola's Standard Essential Patents ('SEPs') to stifle competition against Android, but the EU Commission concluded after an in-depth review of Google's internal documents that '*... Google's rationale for the transaction is to create "patent balance" in the smart mobile device industry and to preserve the ability of Android OEMs to compete and innovate free from the costs and uncertainties of litigation and litigation threats.*'<sup>29</sup> The deal was cleared in February 2012.

24 Duncan, *Is Microsoft trying to snuff out Android with its 'Tax', or just milking it?*, Digital Trends (April 30, 2013), [www.digitaltrends.com/mobile/is-android-being-stifled-by-a-microsoft-tax/](http://www.digitaltrends.com/mobile/is-android-being-stifled-by-a-microsoft-tax/).

25 Press Release, *Novell Completes Merger with Attachmate and Patent Sale to CPTN Holdings*, (April 27, 2011), [www.novell.com/news/press/2011/4/novell-completes-merger-with-attachmate-and-patent-sale-to-cptn-holdings-llc.html](http://www.novell.com/news/press/2011/4/novell-completes-merger-with-attachmate-and-patent-sale-to-cptn-holdings-llc.html).

26 Press Release, *CPTN Holdings LLC and Novell Inc. Change Deal in Order to Address Department of Justice's Open Source Concerns*, April 20, 2011, [www.justice.gov/opa/pr/2011/April/11-at-491.html](http://www.justice.gov/opa/pr/2011/April/11-at-491.html).

27 McMillan, *Wired* (above), [www.wired.com/wiredenterprise/2012/05/rockstar/all/1](http://www.wired.com/wiredenterprise/2012/05/rockstar/all/1).

28 AAI, Letter to the Department of Justice, July 6, 2011, [www.antitrustinstitute.org/sites/default/files/Nortel%20letter%20to%20DOJ.7.6.11.pdf](http://www.antitrustinstitute.org/sites/default/files/Nortel%20letter%20to%20DOJ.7.6.11.pdf).

29 Case COMP/M.6381 – *Google/Motorola Mobility*, paras. 118 and 129, OJ C75 of 14 March 2012.

### The SEP antitrust cases

Apple and Microsoft took immediate countermeasures to disarm Motorola's SEPs: they lodged parallel antitrust complaints with the EU and the US FTC.<sup>30</sup> They argued that Motorola had abused dominance by seeking injunctions based on SEPs against willing licensees, in spite of its promise to license on FRAND terms. A similar case was already pending against another Android OEM, Samsung.<sup>31</sup> The FTC and EU Commission agreed.<sup>32</sup> This was perhaps surprising, given the history of the patent war, the consumer harm if it continued (higher prices, possible exclusion of Android OEMs and attendant loss of innovation), and the findings in the Motorola clearance decision that '*... the aim of the transaction is to protect the Android ecosystem rather than impede competition.*'<sup>33</sup> The legal analysis was novel:

- The FTC and EU took the position Motorola was dominant the markets for each SEP. This is odd, since 'dominance' is '*the power of a firm to behave ... independently of its competitors, its customers and ultimately of the consumers*' allowing it to '*prevent effective competition being maintained on the relevant market*'.<sup>34</sup> Even if each SEP is a market unto itself and Motorola has a 100% share of each such market,<sup>35</sup> Apple and Microsoft have countervailing power, derived from their large patent portfolios. If Motorola tried to seek injunctions or extract high royalties, Microsoft and Apple would (and did) use their own patents to do the same to Motorola, neutralizing the threat or compensating for the royalty. Mutual deterrence is simply incompatible with a finding of dominance.
- The EU and FTC reasoned that an SEP owner who has given a FRAND promise gives up the right to seek injunctions against willing licensees. This makes sense,<sup>36</sup> although Motorola pointed out Apple was hardly a 'willing licensee'. It had refused to negotiate, deployed de-

30 Press Release, '*Commission sends Statement of Objections to Motorola Mobility on potential misuse of mobile phone standard-essential patents*', IP/13/406, [www.europa.eu/rapid/press-release\\_IP-13-406\\_en.htm](http://www.europa.eu/rapid/press-release_IP-13-406_en.htm). See also *Microsoft Corp. v. Motorola Inc.*, 854 F.Supp.2d 993 (United States District Court for the Western District of Washington, February 27, 2012), 696 F.3d 872 (United States Court of Appeals for the Ninth Circuit 2012), 871 F.Supp.2d 1089 (United States District Court for the Western District of Washington, May 14, 2012), 864 F.Supp.2d 1023 (United States District Court for the Western District of Washington, June 6, 2012), (United States District Court for the Western District of Washington, November 30, 2012), Case No. C10-1823LR (opinion by U.S. District Judge James L. Robart, W. D. Wash. April 25, 2013) (based on contract law).

31 Press Release, '*Commission sends Statement of Objections to Samsung on potential misuse of mobile phone standard-essential patents*', IP/12/1448, [www.europa.eu/rapid/press-release\\_IP-12-1448\\_en.htm](http://www.europa.eu/rapid/press-release_IP-12-1448_en.htm).

32 The Commission did not take up Microsoft's complaint, possibly because Microsoft is doing what it says Motorola should not do: it is seeking injunctions against Motorola based on ActiveSync and FAT patents in spite of having given repeated public promises to license these patents on FRAND terms.

33 *Google/Motorola Clearance Decision*, paras. 128 and 131.

34 Case 85/76 – *Hoffmann-La Roche; Guidance Paper*, para. 10.

35 *Google/Motorola Clearance Decision*, para. 61.

36 For a contrary view, see Vesterdorf, '*IP Rights and Competition Law Enforcement Questions*', (2013) *Journal of European Competition Law and Practice*.

laying tactics, refused to cross-license, and engaged in lengthy and expensive litigation.<sup>37</sup>

Motorola and Google entered into a US Consent Decree in July 2013.<sup>38</sup> The text is complicated, but the principles are simple: An SEP user can pre-empt an injunction by making an offer to the patentee (a) to take a license on FRAND terms, limited to SEPs only, and subject (if the patentee wants) to a reciprocal license to the licensee's SEPs on the same standards, (b) to negotiate in good faith for six months, and (c) if no agreement is reached, to have the FRAND rate set by a court or arbitral tribunal that also reviews other disputed terms (like the scope of the cross-license, and whether escrow payments are required). If the user makes no offer, the SEP owner can make one, and is entitled to an injunction if the user refuses or does not comply with the agreed process. Samsung proposed a similar settlement in the EU, expected to lead to an Commitment Decision in early 2014.<sup>39</sup>

A decision in the EU *Motorola* case is expected in early 2014. In addition, the Court of Justice of the European Union is expected to issue a preliminary ruling in 2014 in a similar case, *Huawei v ZTE*.<sup>40</sup>

### Escalation of hostilities: strategic use of privateers

Rockstar's Halloween Attack stepped up hostilities. When CPTN bought Novell's patents in 2011, the owners divided the portfolio. In contrast, Rockstar's owners keep Rockstar alive as a stand-alone PAE, targeting Android OEMs. "Rockstar ... may very well have been a secret weapon in Steve Jobs' plan to 'go thermonuclear' in Apple's battle against Android."<sup>41</sup> This kind of PAE (established or supported by practicing entities with whom it shares its profit) is called a 'privateer', after the sea captains who in centuries

past attacked enemy commercial shipping with a 'letter of marque' from their king, protecting them against the charge of piracy. These entrepreneurs shared their booty with their financial backers. The king would benefit by weakening enemy trade, much like Rockstar's attacks weaken Microsoft's and Apple's rivals.

The danger presented by privateers is royalty-stacking. The greater the fragmentation of patent ownership, the greater the Cournot 'multiple monopoly rent' problem described above. Each licensor wants the maximum royalty, and absent pooling or coordination, increasing the number of licensors grows the royalty stack.

"buildup of licensing fees can have several unattractive consequences. [P]rices are well above marginal costs, causing inefficiently low use of these products. ... [T]his is a magnified version of the monopoly burden resulting from the patent system itself, but it is well to remember Cournot's lesson that the multiple burdens reduce both consumer welfare and the profits of patentees. ... [T]he prospect of paying such royalties [also] necessarily reduces the return to new product design and development, and thus can easily be a drag on innovation."<sup>42</sup>

While normal PAEs might worry that a Cournot stack reduces patentees' profits, Apple and Microsoft have no such concerns, because they will gain sales downstream.

The Cournot problem intensifies if PAEs disavow the original patentee's FRAND promises,<sup>43</sup> but even if they do comply, problems exist: If the original patentee promised to charge less than 2% for its portfolio, and passes on this promise to four PAEs when selling portions of its portfolio, the result may still be a royalty stack of 10%.

There is a second reason for using privateers to attack rivals: Had Apple and Microsoft asserted the patents directly, the OEMs would have counterclaimed based on their patents, and set off the royalties owed to them. The result would be a royalty-free cross-license or – at most – a balancing payment or a much lower one-way royalty stream. Lower royalty payments means lower marginal costs, leading to lower consumer prices. That is how Nortel originally used its patents, defensively.<sup>44</sup> By establishing Rockstar as a separate PAE, the opposite happens: Rockstar makes no products itself, and is immune from counterclaims.<sup>45</sup> It can 'antagonize

37 *Apple Inc. v. Motorola Mobility, Inc.*, W.D. Wis., 11-cv-178-bbc. (Judge Crabb, November 2012) ("It has become clear that Apple's interest in a license is qualified"); ITC, *Samsung v Apple*, July 2013 ("Apple's position illustrates the potential problem of so-called reverse patent hold-up").

38 *In re Motorola Mobility LLC*, F.T.C., No. C-1440, 7/24/13 (Before seeking or enforcing an injunction, the patentee must either have made an offer to license (at least 6 months earlier) or an offer to arbitrate (at least 60 days earlier). Injunctive relief is not available if the potential licensee is 'willing', i.e., accepts the offer to license, the offer to arbitrate, or asks a court to set FRAND terms. An injunction is allowed where the user of patent refuses a license (except that it is allowed to contest validity, infringement, essentiality, and value of the licensed patents), refuses the terms determined by court, or fails to confirm reciprocity. A 'defensive use exception' allows the patentee to seek an injunction if the user seeks an injunction based on its SEP(s) against any patentee product without following procedures equivalent to Consent Decree.) For a similar case, see *In the Matter of Robert Bosch*, FTC File No. 121-0081.

39 Press Release, "Commission seeks feedback on commitments offered by Samsung Electronics to address competition concerns on use of standard essential patents", MEMO/13/910 17 October 2013.

40 Request for a preliminary ruling from the Landgericht Düsseldorf (Germany), 5 April 2013 – *Huawei v ZTE* (Case C-170/13), District Court Düsseldorf, 21 March 2013, case no. 4b O 104/12; OJEU, 2013/C 215/04.

41 Faas, "Apple's Secret Weapon in the Patent Wars is a Nuclear NORAD", May 22, 2012, *Cult of Mac*, www.cultofmac.com/168696/apples-secret-weapon-in-the-patent-wars-is-a-nuclear-norad/.

42 Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, 1 *Innovation Policy and the Economy* 119, 123-24, 127 (2001), <http://faculty.haas.berkeley.edu/shapiro/thicket.pdf>.

43 Carrier, "Antitrust regulators ponder patent trolls – but they need to act", *Ars Technica*, Apr 9 2013, <http://arstechnica.com/tech-policy/2013/04/oped-antitrust-regulators-ponder-patent-trolls-but-they-need-to-act/> ("[A]fter the agencies approved the acquisition of the Nortel patent portfolio by the Rockstar consortium based on promises made by members (Apple and Microsoft) to agree to RAND licensing, the Rockstar CEO publicly stated that the consortium 'isn't bound by the promises that its member companies made'").

44 See McMillan, *Wired* (above).

45 Chiou, *The Dilemma of Defensive Patenting*, <http://econ.ccu.edu.tw/graduate/1021111.pdf>.

its owners' partners and customers in ways that its owner companies could not.<sup>46</sup> And suing the privateer's backers does nothing to reduce the OEMs' royalty burden. At best, it leads to separate royalty streams from the OEMs to Rockstar (passed on to parents as dividends) and from parents to the OEMs, with the effect of raising marginal costs on both ends (and thus raising everyone's prices).

Rockstar is not the only privateer. There are others eyeing Android booty – not mentioning the many hundreds NPEs listed by Patent Freedom LLC:

- Microsoft and Nokia in 2011 armed privateer Mosaïd with 2,185 patents, 1,200 of which are claimed to be SEPs.<sup>47</sup> In exchange, Mosaïd promised Nokia and Microsoft two-thirds of the profits, spurred on by milestone payment obligations and a list of targets.<sup>48</sup> Mosaïd expects profits of \$ 500 billion over 5 years.<sup>49</sup> Interestingly, Rockstar CEO John Veschi is also a Mosaïd board member.
- Recently, Microsoft bought Nokia's mobile business, using an unusual structure: Instead of the patents travelling with the business, they will stay with the seller.<sup>50</sup> Previously, any attack by Nokia against rivals risked triggering a counter-attack. Separating Nokia's patent portfolio from its mobile phone business eliminates this restraint. Nokia can assert its patents without fear of counterclaims, and raise Android OEMs' costs. There is reason to worry: When Ericsson sold its share in the Sony Ericsson mobile phone venture, its royalties are said to have increased manifold. The anti-trust authorities cleared the deal, arguing that creation or reinforcement of dominance on the part of the seller 'fall outside the scope of the EU Merger Regulation'.<sup>51</sup> Yet the Commission has both the power and the duty under Article 2(3) of the EU Merger Regulation to review whether (a) the merger leads to a significant impediment of effective competition, regardless of whose market position is changed so as to bring that about, and (b) to accept commitments from a seller, and even from a third party, as a condition for clearing a concentration that raised significant competition concerns.<sup>52</sup>

The failure to do so effectively turns Nokia into a PAE – unless the Commission acts on its promise to monitor abuse.

The war is not over, but what can we do to achieve patent peace?

### It is possible to stop hold-up

The solution is not to prohibit patent transfers altogether, or to condemn all PAEs as evil incarnate.<sup>53</sup> It is efficient to allow patent aggregators to buy up patents and act as license facilitators, creating a market for IP for, and sharing revenues with, inventors who do not have the resources to run a licensing program. Patentees may set up patent pools to lower transaction costs and offer a one-stop-shop for users,<sup>54</sup> and users may establish defensive pools that purchase patents to license their shareholders.<sup>55</sup>

Just like not all NPEs are trolls, not all trolls are NPEs. Manufacturers normally act reasonably if they insist on exclusivity for patents they have not promised to license; use their own patents to extract cross-licenses; or sell off patents that they do not themselves practice, through an open licensing program (IBM, Philips, and Texas Instruments being pioneers in that respect).<sup>56</sup> But patents can also be used inappropriately to gain strategic advantage in a neighbouring market by denying interoperability or capturing standards,<sup>57</sup> or to harm competitive innovation.

So, it's not who you are, but what you do. The worst conduct is a strategy of:

- buying portfolios of patents, keeping silent or even concealing the patents until users have innocently invested heavily in product development and production, have achieved a high market share, and face high or insurmountable switching costs; and

46 McMillan, *How Apple and Microsoft Armed 4,000 Patent Warheads*, above.

47 Popofsky and Laufert: *Patent Assertion Entities and Antitrust: Operating Company Patent Transfers*, at [www.ropesgray.com/-/media/Files/articles/2013/04/Antitrust-Attacks-on-Patent-Assertion-Entities.PDF](http://www.ropesgray.com/-/media/Files/articles/2013/04/Antitrust-Attacks-on-Patent-Assertion-Entities.PDF).

48 Carrier, above.

49 "MOSAID Addresses Wi-LAN's Many Mischaracterizations in Its Notice of Extension" MOSAID press release, September 30, 2011 See also MOSAID 2011 Investors Letter.

50 Microsoft, "Microsoft to acquire Nokia's devices & services business, license Nokia's patents and mapping services" [www.microsoft.com/en-us/news/press/2013/sep13/09-02announcementpr.aspx](http://www.microsoft.com/en-us/news/press/2013/sep13/09-02announcementpr.aspx).

51 Press Release IP/13/1210, [http://europa.eu/rapid/press-release\\_IP-13-1210\\_en.htm](http://europa.eu/rapid/press-release_IP-13-1210_en.htm). Case No COMP/M.7047 – Microsoft/Nokia, [http://ec.europa.eu/competition/mergers/cases/decisions/m7047\\_20131204\\_20310\\_3495212\\_EN.pdf](http://ec.europa.eu/competition/mergers/cases/decisions/m7047_20131204_20310_3495212_EN.pdf).

52 Joined Cases C-68/94 and C-30/95 *French Republic and Société commerciale des potasses et de l'azote (SCPA) and Entreprise minière et chimique (EMC) v Commission* ('Kali und Salz') [1998] ECR I-1375, para. 171. See also E. ON/ MOL (Case No COMP/M.3696, December 21, 2005).

53 Lemley and Melamed: "Missing the Forest for the Trolls" (May 23, 2013).

54 *MPEG-2* (Commission Press Release, IP/98/1155 and notice in OJ No 98/C 229/06 of 22.7.98); *DVD* (Commission Press Release, IP/00/1135); *3GPP* (Commission Press Release IP/02/1651); Draft EC Technology Transfer Guidelines, February 2013, para 228ff.

55 Examples include IXPI ([www.ipxi.com/](http://www.ipxi.com/)); DOJ, *Justice Department Issues Business Review Letter to Intellectual Property Exchange International* (Mar 26, 2013) [www.justice.gov/opa/pr/2013/March/13-at-349.html](http://www.justice.gov/opa/pr/2013/March/13-at-349.html)), the Open Innovation Network (OIN, [www.openinnovationnetwork.com/](http://www.openinnovationnetwork.com/)), the Allied Security Trust ([www.alliedsecuritytrust.com/](http://www.alliedsecuritytrust.com/)), and RPX Corporation ([www.rpxcorp.com](http://www.rpxcorp.com)). See Hagi and Yoffe, *Intermediaries for the IP Market*, October 2011, [www.hbs.edu/faculty/Publication%20Files/12-023.pdf](http://www.hbs.edu/faculty/Publication%20Files/12-023.pdf).

56 For an insightful and highly readable description of the evolution of IBM's and Microsoft's practices, see *Burning the Ships*.

57 For an example of strategic denial of interoperability, see Microsoft Commission Decision of Mar. 24, 2004, Case COMP C-3/37.792 ('Microsoft 2004'), confirmed on appeal by General Court (Case T-167/08 *Microsoft v EC*).

- then threatening with injunctions to extract royalties that reflect not merely the innovative value of the patented technologies but also the switching costs.<sup>58</sup>

PAEs especially can afford to do this, because they produce nothing themselves, and are therefore invulnerable to patent counterattack. This is 'the sort of wholesale purchasing of patent rights for assertion against deep-pocketed firms that we see everywhere today. This can be an especially egregious practice, bordering on extortion, when committed by firms that don't produce any products – the infamous "patent trolls."<sup>59</sup> This conduct is still more likely in the US than the EU, because of availability of contingency fees, high costs of discovery for defendants, high jury awards, possibility of multiple damages for wilful infringement, the greater proliferation of low-quality patents, and the absence of a loser-pays principle. But IPRCom (which sued Nokia for \$2.2billion in Germany recently) is no longer the only PAE engaging in hold-up in the EEA.<sup>60</sup>

Unfortunately, some manufacturers confronted by PAEs have adopted an 'if you can't beat them, use them' strategy.<sup>61</sup> These privateers may well be the greatest long-term threat to innovation, but there may be ways to disarm them.

**Denying injunctions under patent or contract law:** PAEs tend to use injunctions to hold up their victims. In US law, requests for injunctions are reviewed under the four-part *eBay* equity test.<sup>62</sup> An injunction is appropriate if (a) plaintiff suffers irreparable injury, (b) other remedies, such as damage awards, are inadequate, (c) the plaintiff suffers more hardship than the defendant; and (d) an injunction does not harm the public interest. Under this test, PAEs are not normally entitled to injunctions.<sup>63</sup> It is unfortunate that the ITC still ignores it.

In the EU, injunctions are neither guaranteed<sup>64</sup> nor easily denied.<sup>65</sup> In the UK, for instance, 'it would have to be a very strong case for an injunction to be withheld. ... the grant or refusal of a final injunction is not merely a matter of the balance of convenience. Justice requires that the court observe the principles enunciated in *Shelfer's case* and remembers that if the effect of the grant of an injunction is not oppressive the defendant cannot buy his way out of it, even if the price, objectively ascertained, would be modest. ... "[O]ppressive" in this context is that the effect of the grant of the injunction would be grossly disproportionate to the right protected. The word "grossly" avoids any suggestion that all that has to be done is to strike a balance of convenience.'<sup>66</sup>

This 'grossly disproportionate' test could apply to a PAE hold-up where an injunction on a part affects the entire product, or imposes costs on the defendant that are greater than the plaintiff's reasonable pre-lock-in damages. Unfortunately, at the time preliminary injunctions are considered, the measure of damages is often not known. The equity principle should also apply when a FRAND promise is given,<sup>67</sup> whether the patent is standard-essential or not.<sup>68</sup>

IT suppliers have expressed a concern that the Unified Patent Court could become a patent troll haven, if injunctions are issued too readily.<sup>69</sup> In fact, it can be argued that application of an *eBay*-type proportionality test is required under Article 36 TFEU, since the issuance of an injunction is a restriction of trade between Member States, which Article 36 TFEU allows only subject to a proportionality test.<sup>70</sup> Similarly, Article 3 of Enforcement Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights requires that IP remedies be 'proportionate' and 'avoid the creation of barriers to legitimate trade'. Article 12 provides that Member States may provide alternative to injunction if

58 Examples of companies that have been accused of such conduct are NTP (who held up RIM), IPRCom (who held up Nokia, amongst others, using Bosch patents), Rambus, and Intellectual Ventures. For a critical view, see *Ewing, Dear Mr. President: Extortion? 12 Leads Re Patent Trolls for Your DOJ-FTC Investigation, 2013*. See also <http://stlr.stanford.edu/2012/01/the-giants-among-us/>. Love, *An Empirical Study of Patent Litigation Timing: Could a Patent Term Reduction Decimate Trolls Without Harming Innovators?*, August 30, 2011.

59 Phelps, *Burning the Ships*, above, p. 13.

60 Helmers, McDonagh and Love, *Is there a patent troll problem in the UK*, September 26, 2013. See also Joff Wild, "Why the US's most litigious NPE is a huge fan of the German patent system," *IAM Magazine*, December 2013.

61 Comments of the AAI on Patent Assertion Entities, Feb 2, 2013, [www.justice.gov/atr/public/workshops/pae/comments/paew-0011.pdf](http://www.justice.gov/atr/public/workshops/pae/comments/paew-0011.pdf).

62 *eBay Inc v. MercExchange, L.L.C.*, 547 U.S. 388 (2006).

63 *Apple v. Motorola Inc.*, 11-cv-8540, U.S. District Court, N.D. Illinois, June 7, 2012 (Posner J. denied Apple's request for injunctive relief: "Because the parties believe that damages are an adequate remedy for the alleged infringements (though they failed to present evidence on damages strong enough to withstand summary judgment), and because injunctive relief would impose costs disproportionate to the harm to the patentee and the benefit of the alleged infringement to the alleged infringer and would be contrary to the public interest, I cannot find a basis for an award of injunctive relief.").

64 Petit, *Injunctions For Frand-Pledged SEPs: The Quest for an Appropriate Test of Abuse under Article 102 TFEU*, 2014, p. 40-41.

65 See, for instance, *Rechtbank 's-Gravenhage*, 17.03.2010, *Philips/SK Kassetten GmbH*.

66 *Navitaire Inc v EasyJet (No 2)* [2006] RPC 4 213 at 250; *Virgin Atlantic v Premium Aircraft* [2009] EWCA Civ 1513; *HTC v Nokia*, [2013] EWHC 3778 (Pat). Cf also *Bundesgerichtshof KZR 39/06*, decision of May 6, 2009; *Sony v. LGE*, District Court The Hague, The Netherlands, 10 March, 2011, Case Number 389067/KG ZA 11-269 (injunction denied); *Samsung v. Apple*, District Court The Hague, The Netherlands, 14 March 2012 Case numbers 400367 / HA ZA 11-2212, 400376 / HA ZA 11-2213 and 400385 / HA ZA 11-2215 (injunction denied pending negotiation to the extent this unfairly enhances SEP owner's bargaining position); *Landgericht Mannheim*, 7 O 122/11, *Motorola Mobility Inc. v Apple Sales International*, judgment of December 9, 2011.

67 *Nokia v IPRCom* [2012] EWHC 1446 (Ch) May 18, 2012; See also *Microsoft v. Motorola*, above (Robart J., contract law).

68 There are many non-SEP FRAND promises. See [www.pijip.org/non-sdo-patent-commitments/](http://www.pijip.org/non-sdo-patent-commitments/); Non-SSO patent commitments and pledges online symposium; Contreras: Market reliance and pledged patents; Wu and Soboleva, *Standard Setting: Should there be a level playing field for all patent commitments?*; Layne-Farrar, *Getting past the SEP RAND obsession*;

69 Open Industry Letter, <https://docs.google.com/file/d/0BwxyRPFduTN2NkpoN29UVm11OWc/edit>. (26 Sept 2013) and [https://docs.google.com/file/d/0B\\_U9nV8-MjxrNmFCaVNOSGREajVQZIE0R1j-RkVjQ0RyQ253/edit?usp=sharing&pli=1](https://docs.google.com/file/d/0B_U9nV8-MjxrNmFCaVNOSGREajVQZIE0R1j-RkVjQ0RyQ253/edit?usp=sharing&pli=1) (25 Feb 2014)

70 Graf, *National Courts and EU Regulators – Institutional Relations in the Patent Wars*, forthcoming.

defendant acted 'unintentionally,' if injunction would cause 'disproportionate harm' and if 'pecuniary compensation to the injured party appears reasonably satisfactory'.

**Applying Article 102 TFEU to curb injunctions against willing licensees:** Competition law may also provide a solution.<sup>71</sup> The European Court of Justice is reviewing in *Huawei v ZTE* whether a FRAND promise is a waiver of the right to seek injunctions against willing licensees,<sup>72</sup> as the Commission argued in *Samsung*<sup>73</sup> and *Motorola*.<sup>74</sup> Based on the template of the *Rambus* case, a patentee may be found to abuse dominance in an upstream technology market if it:<sup>75</sup>

- creates legitimate expectations that the invention can be practiced for free or at reasonable cost, by luring manufacturers into investing in development or production based on the patented technology, by a FRAND promise, a promise of open licensing, a consistent practice of non-enforcement, or concealment of 'submarine' patents even though the patentee knew that its invention was being used innocently before the user had made irreversible investments;
- Fails to alert the user of the high royalty demand before investments decisions are made, but waits until the defendant faces high switching costs or is locked in; and
- Once the user is locked in, seeks an injunction to extort 'hold up' royalties covering not just value of the innovation itself, but also the switching costs, or opportunity costs of not taking a license – which may be close to the full profits from the entire business. The PAE thus extracts the value associated with complementary technologies (not covered by the patent) or the user's development, production, and marketing of the product. The user takes the risk; the patentee reaps the reward.

**Applying Article 101 TFEU to privateering:**<sup>76</sup> Article 101 TFEU and parallel provisions of national law prohibit 'all agreements between undertakings, ... which have as their object or effect the prevention, restriction or distortion of competition within the common market.' Apple and Microsoft's arrangement to establish Rockstar as a stand-alone PAE (instead of dividing the patents) is indisputably an agreement between undertakings. But does it have the 'object or effect the prevention, restriction or distortion of competition?'

Under European law, if an agreement has a restrictive 'object' there is no need to prove restrictive effects.<sup>77</sup> Such a restriction (a 'per se' violation in US antitrust parlance) is found where experience or economic analysis indicates that the agreement by its 'very nature' has the 'potential' to restrict competition.<sup>78</sup> In Rockstar's case, an analysis 'by object' is appropriate because the arrangement is akin to a cartel: platform competitors Microsoft and Apple take joint action they know will impose additional costs on rivals, thus creating an environment where they can raise prices or gain market share themselves. Moreover, standard economic analysis indicates that (a) fragmentation of patent ownership has a foreseeable Cournot royalty stacking effect, raising rivals' costs, and (b) using a PAE has a foreseeable royalty-raising effect by eliminating countervailing power.<sup>79</sup> Consumers suffer because royalty stacking raises price and excludes rival platforms, which in turns reduces innovation and consumer choice.<sup>80</sup>

To establish a restrictive object, an agreement must be assessed in its specific 'economic and legal context'.<sup>81</sup> In the case of Rockstar, for example, this includes an environment conducive to royalty stacking:

76 For a reverse attempt to invoke competition law, see *Cascades Computer Innovation LLC v. RPX Corp.*, (N.D. Cal., No. 4:12-cv-01143-YGR, 12/3/13) (patent troll pleaded 'hub-and-spoke' conspiracy among Android device manufacturers to refuse to license the company's patents (motions to dismiss denied)).

77 Recent cases expand the 'object restrictions' beyond the classic scenarios (Cases C-501/06 P, C-513/06 P, C-515/06 P and C-519/06 P, *GSK Spain* [2009] ECR I-09291; Case C-439/09, *Pierre Fabre* [2011] ECR I-09419; Cases C-403/08 and C-429/08; *Murphy*, [2011] ECR I-09083, and T-472/13 *Lundbeck*. This shows the concept is flexible, and it is possible to qualify agreements as 'by object' even absent a precedent.

78 Case C-8/08, *T-Mobile Netherlands* [2009] ECR I-04529; Case C-299/94, *Irish Beef* [1996] ECR I-01925; Case C-32/11, *Allianz Hungária Biztosító Zrt I.* judgment of 14 March 2013, n.y.r. (certain forms of collusion between firms 'can be regarded, by their very nature, as being injurious to the proper functioning of normal competition.'). Commission Guidelines on the Application of Article 101(3), [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52004XC0427\(07\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52004XC0427(07):EN:HTML), paragraph 22.

79 Rockstar does not meet the conditions of a patent pool under EU law. It does not license its patents on FRAND terms. It includes substitutable / non-essential patents (TTG 228, 236), leading to tying and reducing price competition between substitutable technologies. Rockstar is not an open patent pool, and has no pro-competitive one-stop-shop effect or transaction cost savings, considering that the parents continue to license their patents separately.

80 See <http://gigaom.com/2013/11/01/android-under-attack-rivals-unleash-nuclear-patent-hell-against-samsung-google/>.

81 *IAZ*, [[cursief[GSK Spain [2009] ECR I-09291;]] See e.g. Case C-234/89 *Delimitis* [1991] ECR I-935, ¶ 31; Case C-399/93 *Oude Luttikhuis* [1995] ECR I-4515, 10; Case C-214/99 *Neste* [2000] ECR I-11121, ¶ 25; Joined Cases T-374/94 et al. *European Night Services* [1998] ECR II-3141 ¶ 134; Case T-77/94 *VGB* [1997] ECR II-758, ¶ 140.

71 *Orange Book*, German Supreme Court, judgment of May 6, 2009, KZR 39/06 (A licensee can avoid an injunction by (a) asking court to set royalty on FRAND basis, (b) paying requested royalty into escrow or making counteroffer for escrow payment that licensor cannot reasonably reject, and (c) refrain from imposing conditions like a finding of validity or infringement standard.).

72 Request for a preliminary ruling from the Landgericht Düsseldorf (Germany) lodged on 5 April 2013 – *Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH*, (Case C-170/13); *Huawei v. ZTE*, District Court Düsseldorf, Germany, 21 March 2013, case no. 4b O 104/12.

73 EC Press Release IP/12/1448, 21/12/2012: "Samsung's seeking of injunctions against Apple in various Member States on the basis of its mobile phone standard-essential patents ('SEPs') amounts to an abuse of a dominant position prohibited by EU antitrust rules. While recourse to injunctions is a possible remedy for patent infringements, such conduct may be abusive where SEPs are concerned and the potential licensee is willing to negotiate a licence on Fair, Reasonable and Non-Discriminatory (so-called 'FRAND') terms."

74 EC Press Release IP/13/406, 06/05/2013: *Antitrust: Commission sends Statement of Objections to Motorola Mobility on potential misuse of mobile phone standard-essential patents*, [http://europa.eu/rapid/press-release\\_IP-13-406\\_en.htm](http://europa.eu/rapid/press-release_IP-13-406_en.htm).

75 Commission Decision of 9 December 2012, Case COMP/38.636, *Rambus Inc.*, 2009 O.J. (C 133) 16. See special issue on Rambus, THE ANTITRUST BULLETIN: Vol. 57, No. 1/Spring 2012. For US law analysis, based on an estoppel theory, see Popofsky and Laufert: *Patent Assertion Entities and Antitrust: Operating Company Patent Transfers*, at [www.ropesgray.com/~media/Files/articles/2013/04/Antitrust-Attacks-on-Patent-Assertion-Entities.PDF](http://www.ropesgray.com/~media/Files/articles/2013/04/Antitrust-Attacks-on-Patent-Assertion-Entities.PDF).

- Microsoft already charges high royalties under its Android license program, with further costs imposed by Apple's litigation. As a result, only one Android OEM makes meaningful profit, with all others making losses.
- Rockstar is selling patents, for instance to PAE Spherix, further increasing the number of licensors;<sup>82</sup>
- Microsoft and others systematically transfer patents to PAEs like Mosaid, Pendrell and Acacia/Adaptix. Microsoft reportedly undertakes strategic patent divestitures in transactions from which rivals are excluded.<sup>83</sup> Apple in 2011 transferred patents to Digitude to sue Apple's rivals; Nokia transferred patents to Vringo, Pendrell and others 20 times over past five years.<sup>84</sup>
- Microsoft's and Apple's use of PAEs spurs others to do the same. Ericsson transferred more than 2,000 patents to Unwired Planet in return for 'ongoing rights in future revenues'; Alcatel transferred patents to Pendrell and Multimedia Patent Trust, BT to Suffolk, and so on.
- Most recently, Microsoft arranged its acquisition of Nokia's mobile business such that Nokia has increased incentives and ability to use its patents against Android OEMs.

This network of PAEs increases the foreseeable royalty stack, and support a finding of infringement of Article 101 because (1) royalty costs are barriers to entry or expansion in the market; and (2) the Rockstar agreement makes a significant contribution to those barriers.<sup>85</sup>

**Ban of excessive pricing under Article 102(a) TFEU:** A third approach, albeit imperfect, would be to use the ban on excessive royalty under 102(a) TFEU. If a firm is entitled by law to an injunction, even if it is dominant, it is also allowed to do the lesser thing and seek high royalties. Nonetheless, hold-up royalties should be deemed excessive where: (a) if a duty to license exists, like in *Microsoft interoperability*,<sup>86</sup> essential facilities cases,<sup>87</sup> and exclusionary abuse of right

cases;<sup>88</sup> (b) if a company has made a promise to license on FRAND terms on which others relied;<sup>89</sup> and (c) If a patentee knew that its invention was being used before the user had made irreversible investments, but failed to alert the user, and engaged in hold-up after lock-in, as in *Rambus*.<sup>90</sup>

Intriguingly, after the recent merger review of Microsoft's acquisition of Nokia, the Commission suggested that it might apply Article 102(a) TFEU to exploitative royalty demands, even if non-SEPs are used: The Commission effectively recognized that the deal gave Nokia greater incentive and ability to exploit its portfolio aggressively than before. It declined to block the merger, but stated it 'will remain vigilant and closely monitor Nokia's post-merger licensing practices under EU antitrust rules, in particular Article 102 [TFEU] that prohibits the abuse of a dominant market position'. Unless the Commission statement was an empty political excuse, this suggests that the Commission would intervene if the patentee raises its royalties post-transaction.<sup>91</sup>

82 See [www.ip-rockstar.com/sales/patent-sales](http://www.ip-rockstar.com/sales/patent-sales). *Spherix Acquires Over 100 Patents and Patent Applications Portfolio from Rockstar Consortium*, Jan. 6, 2014 /PRNewswire, [www.marketwatch.com/story/spherix-acquires-over-100-patents-and-patent-applications-portfolio-from-rockstar-consortium-2014-01-06](http://www.marketwatch.com/story/spherix-acquires-over-100-patents-and-patent-applications-portfolio-from-rockstar-consortium-2014-01-06); [www.marketwired.com/press-release/spherix-to-partner-with-world-famous-rockstar-consortium-nasdaq-spex-1811848.htm](http://www.marketwired.com/press-release/spherix-to-partner-with-world-famous-rockstar-consortium-nasdaq-spex-1811848.htm).

83 For an earlier example of this strategy to attack Linux in 2008, see [www.groklaw.net/articlebasic.php?story=20090908164954318](http://www.groklaw.net/articlebasic.php?story=20090908164954318). Excluding bidders confirms that the goal is to raise rivals' costs indirectly.

84 Decker, *Patent privateers Sail the legal waters against Apple, Google*, quoting Nokia's Head of IP Melin, Jan 11, 2013, [www.bloomberg.com/news/2013-01-11/patent-privateers-sail-the-legal-waters-against-apple-google.html](http://www.bloomberg.com/news/2013-01-11/patent-privateers-sail-the-legal-waters-against-apple-google.html).

85 Case C-234/89 *Delimitis* [1991] ECR I-935, judgment of 28 February, 1991.

86 Case T-167/08, *Microsoft v Commission*, judgment of the General Court of June 27, 2012.

87 Joined cases C-241/91 P and C-242/91 P, *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) v Commission (Magill)*, [1995] ECR I-00743 (Compulsory licenses could be granted in exceptional circumstances, where (a) access to the assets was 'indispensable' and the dominant company was the only source; (b) the dominant company prevented introduction of a new product or innovation for which there was 'specific, constant and regular potential demand from consumers' which the dominant company did not fulfill; (c) there is no justification for refusal; and (d) the effect of refusal was to 'exclude all competition' downstream).

88 Case 238/87, *AB Volvo v Erik Veng*, [1988] ECR I-06211 ("an obligation imposed upon the proprietor of a protected design to grant to third parties, even in return for a reasonable royalty, a license for the supply of products incorporating the design would lead to the proprietor thereof being deprived of the substance of his exclusive right." The Court went on to mention three examples where Article 102 TFEU could apply: (i) arbitrarily refusing to supply body panels (the protected goods) to independent repairers (purchasers who use these goods for the services they offered); (ii) fixing of prices for the body panels at an unfair level; and (iii) ceasing production of the body panels even if they are still needed for repairs and maintenance. All of these cases could be interpreted as involving use of the IPR as an instrument to exclude others improperly from a downstream or neighbouring market. For instance, if spare parts are arbitrarily refused or unfairly high priced, third parties cannot repair the cars, since they cannot buy the parts and cannot make the spare parts without a license. This precludes competition with the repair service provided by the parts supplier.

89 For a determination of FRAND rates, based on the *Georgia-Pacific* factors, applied *ex ante*, 'before it gets the extra boost in value by the standard becoming final and everyone has to practice the patent to practice the standard', see *Microsoft Corp. v. Motorola Inc.*, 2013 WL 2111217, No. C10-1823JLR (W.D. Wash. April 25, 2013) (Robart) (breach of contract); See also *In re Innovatio IP Ventures, LLC Patent Litig.*, MDL 2303, 2013 WL 5593609 (N.D. Ill. Oct. 3, 2013), *Ericsson Inc. v. D-Link Sys., Inc.*, 6:10-CV-473, 2013 WL 4046225 (E.D. Tex. Aug. 6, 2013); *Huawei v InterDigital* (Guangdong Higher People's Court, October 28, 2013) and *Huawei v ZTE*, Request for a preliminary ruling from the Landgericht Düsseldorf (Germany) lodged on 5 April 2013 (Case C-170/13). *Ex ante* valuation also appears in the EC Horizontal Guidelines, para 289: "it may be possible to compare the licensing fees charged by the company in question for the relevant patents in a competitive environment before the industry has been locked into the standard (ex ante) with those charged after the industry has been locked in (ex post). This assumes that the comparison can be made in a consistent and reliable manner." See also *Rambus*, above. This approach works if there were substitute technologies before technology was chosen, and data were available on price and relative quality as complainants argued in *Rambus*. If direct data are unavailable the only approach is to make a 'consistent' comparison with prices of similar products in competitive conditions (Case-27/76; *United Brands* [1978] ECR I-00207; Case 22/79, *SACEM*, [1979] ECR I-03275, and Case COMP/38.636, *Rambus.*, 2009 O.J. (C 133) 16; Case 30/87, *Bodson* [1988] ECR I-002479).

90 *Rambus*, above (Patentee exploits its information advantage to obtain ex post market power).

91 Such a case may be more difficult in the US. See *Intellectual Venture v Capital One*, USDC Eastern Distr Virginia, Memorandum Opinion, December 18, 2013, Case 1:13-cv-00740-AJT-TCB.

### Summary and Conclusion

The growing complexity of IT products and fragmentation of patent ownership increase the risk of patent hold-ups and royalty stacking. These concerns exist especially where the patentee (a) creates expectations of fair and reasonable licensing, non-assertion, or a patent-free environment, (b) keeps silent while users make investments based on those expectations, and (c) exploits the resulting lock-in to extract royalties reflecting not just the innovative value of the technology, but also the switching costs and the opportunity costs of not taking a license – or arranges for a PAE to do so. This strategy is a concern under Article 102 TFEU especially if a PAE is involved, since PAEs can be found dominant (in the absence of countervailing power of the prospective licensee) more easily than a practicing entity.

Antitrust authorities have thus far concentrated on hold-ups in the context of SEPs (rightly in *Rambus*, wrongly in *Samsung* and *Motorola*, because the facts in those cases do not fit the theory). They say it is abusive to seek injunctions on SEPs against 'willing licensees'. The FTC Consent Decree in *Motorola*, the *eBay* judgment of the US Supreme Court, the recent UK High Court case in *IPCom*, and the forthcoming Preliminary Ruling in *Huawei v ZTE* will provide guidance. But consumer harm is not limited to situations involving SEPs, as *Orange Book* indicates. FRAND-encumbered non-SEPs like ActiveSync and FAT, commercially essential patents, and even patent portfolios that are so large as to be *de facto* unavoidable are also used as hold-up weapons. The Commission's statements following the sale of Nokia's mobile business to Microsoft suggests that the Commission is prepared to use Article 102(a) TFEU also for non-SEPs, but it remains to be seen whether the Commission will do what it promised.

Strategic use of privateers is an even more nefarious trend, and Rockstar's Halloween Attack is a bad omen. Manufacturers have begun to disaggregate patent portfolios and transfer portions to multiple PAEs with profit sharing agreements, knowing that these PAEs will hold up their rivals, leading to royalty stacking. Consumer harm consists of price increases and even exclusion of rivals when the costs become prohibitive. These patent transfers often fall below the thresholds of the merger control.

Patents are supposed to foster innovation, but are now also used to block it. The system is turning against itself. If antitrust authorities and courts allow this to continue, these practices will spread. Those who foster privateering may become the victims of their own strategems, and the problem may infect other industries.<sup>92</sup> It may well be some time before consumers see increased prices and reduced competition, but when they do, it will be even more diffi-

cult to redress the problem. Prevention is better than cure.<sup>93</sup> Privateering can and should be addressed under Article 101 TFEU.

92 Feldman & Price, "Patent Trolling – Why Bio & Pharmaceuticals are at Risk," [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2395987](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2395987)

93 *Microsoft v Commission* above, para 561-562 (Competition law 'does not apply only from the time when there is no more, or practically no more, competition on the market. If the Commission were required to wait until competitors were eliminated from the market, or until their elimination was sufficiently imminent, before being able to take action under Article 82 EC, that would clearly run counter to the objective of that provision, which is to maintain undistorted competition in the common market and, in particular, to safeguard the competition that still exists on the relevant market.').