

Patent Assertion Entities and Antitrust: Operating Company Patent Transfers

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The power of a patent can depend on its holder. In one set of hands, a patent might play a defensive role, warding off suits by similarly armed competitors. But when placed in another's, the same patent can serve as a weapon for extracting royalties from inadvertent infringers or for raising rivals' costs. In short, much like the theory of relativity, the ability and incentive to assert a patent can turn on the positions rights holders and enforcement targets occupy.

The ease with which patents change hands, and the eruption of new business models focused on patent monetization, amplify the importance of understanding the consequences of this Einsteinian patent/antitrust twist. Today, a vibrant market exists for patent rights.¹ Buyers of patents frequently include "patent trolls," which, like the Federal Trade Commission, we call Patent Assertion Entities or "PAEs." PAEs typically do not make or sell products. Rather, their business model is to make money from monetizing patent rights, typically by licensing or suing Operating Companies (firms that practice patents).

In this article, we survey certain antitrust issues presented by an emerging trend: the outsourcing by Operating Companies of patents to PAEs, a phenomenon some commentators describe as "privateering."² Operating Company transfers of patents to PAE proxies can raise competitive concerns. Through transfers that evade constraints on their own ability to enforce patents, Operating Companies can harness PAEs to raise rivals' costs. PAE proxies can enable Operating Companies to evade F/RAND³ commitments and thereby engage in patent hold-up. Operating Companies can retain the ability, through contract or otherwise, to influence a PAE's choice of enforcement targets or intensity of monetization efforts. Operating Companies can combine these elements to hinder rivals, for example by parceling out pieces of a portfolio of standard-essential patents to PAEs through contracts that create incentives for PAE transferees to aggressively target competitors.

Such arrangements can harm not only rivals, but also competition, consumers, and innovation. Moreover, well-established antitrust principles govern Operating Company/PAE patent outsourcing arrangements. Whether any particular Operating Company/PAE transfer implicates the antitrust laws depends on the arrangement's particular facts. Firms contemplating such arrangements accordingly must consider the antitrust risks such arrangements can entail, including potential agency scrutiny. And firms subject to PAE enforcement actions might consider appropriate antitrust and related counterclaims.

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¹ See generally Anne Kelley, *Practicing in the Patent Marketplace*, 78 U. CHI. L. REV. 115, 117 (2011).

² See, e.g., Tom Ewing, *Introducing the Patent Privateers*, 45 INTELLECTUAL ASSET MGMT. MAG. 31, 35–36 (2011).

³ Following typical conventions, in this article we use "F/RAND" to refer to obligations to license on terms that are either FRAND (fair, reasonable, and non-discriminatory) or RAND (reasonable and non-discriminatory).

Background: PAEs, Privateering, and Recent Antitrust Attention

PAEs typically neither generate nor practice patents. Rather, they acquire and assert patents for profit. As the FTC has explained: “The business model of PAEs focuses on purchasing and asserting patents against manufacturers already using the technology, rather than developing and transferring technology.”⁴ PAEs thus are usefully distinguished from Operating Companies—firms that practice patents. PAEs monetize patents, by and large, through licensing Operating Companies or by bringing patent infringement suits against them.

PAE activity has exploded. Sales to PAEs and other non-practicing entities represent 75 percent of all patent transactions.⁵ PAEs in 2012 accounted for 62 percent of all patent suits.⁶ The proliferation of PAEs has spawned concerns that PAEs contribute little to innovation, but rather impose what some characterize as a patent “tax” on productive activity.⁷ According to this view, PAE’s ever-increasing enforcement activities—which typically occur following commercialization of an invention—produce no value to society. When, for example, a PAE asserts a patent obtained from a third party against an Operating Company, “[a] manufacturer’s royalty payment may raise costs to consumers, but it obtains only the avoidance of infringement litigation, not the benefit of the technology itself.”⁸ Put differently, a PAE’s ex post assertion imposes a tax that may reflect not the ex ante value of the technology, but rather the “hold-up” value of asserting the patent after technology-specific or other costs have been sunk.⁹

Accordingly, although some argue that PAEs help fund independent inventors and those otherwise incapable of obtaining a reasonable return on their inventive efforts,¹⁰ many contend that PAEs impose a significant drain on America’s most innovative industries. Some scholars conclude that less than 25 percent of PAE revenues flow to innovation¹¹ and that “less than two percent of losses in wealth caused by PAEs passed through to independent inventors.”¹² Moreover, according to recent research, the direct costs of PAE patent assertion activities are staggering: some \$29 billion in 2011, a figure that has increased by 400 percent since 2005.¹³ Against this backdrop, the FTC judged PAEs’ benefits “uncertain” and warned that PAEs “can distort competition in technology markets, raise prices and decrease incentives to innovate.”¹⁴

These aspects of the modern patent landscape—the rise of the PAE model; the ease with which PAEs can obtain patents; and the differences between PAEs’ and Operating Companies’ incen-

Sales to PAEs and other non-practicing entities represent 75 percent of all patent transactions.

⁴ FED. TRADE COMM’N, THE EVOLVING IP MARKETPLACE ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION 8 (2011) [hereinafter EVOLVING IP MARKETPLACE], available at <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>. The FTC described numerous other models, including PAEs that also function as Operating Companies. *Id.* at 62–67. In this article, we focus solely on PAEs.

⁵ Kelley, *supra* note 1, at 118.

⁶ RPX, *Tracking PAE Activity: A Post-Script to the DOJ Review*, <http://www.rpxcorp.com/index.cfm?pageid=14&itemid=29> (last visited Feb. 19, 2013).

⁷ EVOLVING IP MARKETPLACE, *supra* note 4, at 53.

⁸ *Id.* at 52.

⁹ See generally James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes* 13 (Boston Univ. School of Law Working Paper No. 12-34, June 22, 2012) (explicating hold-up), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2091210.

¹⁰ See Brian Yeh, *An Overview of the ‘Patent Trolls’ Debate*, Congressional Research Service Report for Congress 2 (Aug. 20, 2012) (describing asserted benefits), available at https://www.eff.org/sites/default/files/R42668_0.pdf.

¹¹ *Id.* at 2.

¹² *Id.* at 8.

¹³ Bessen & Meurer, *supra* note 9, at 2, 18–19.

¹⁴ EVOLVING IP MARKETPLACE, *supra* note 4, at 71.

tives—fuel an emerging practice that can raise antitrust concerns: the transfer of patents (or portfolios) from Operating Companies to PAE enforcement proxies. The transfer of patents from Operating Companies to PAEs is not new. PAEs have frequently mined Operating Companies for patents to fuel their patent monetization programs. What is new is that Operating Companies appear increasingly willing to deputize PAE “privateers”¹⁵ to enforce their patents against rivals. To give some recent examples:

- Microsoft and Nokia in 2011 collaborated in transferring 2,000 patents, many of which were standards-essential patents (SEPs), to Canadian PAE MOSAID.¹⁶ Nokia subsequently transferred additional patents to PAEs Sisvel and Vringo.¹⁷
- In 2012, British Telecom (BT) sued Google for patent infringement relating to Android, claiming that several of Google’s services violate BT patents.¹⁸ BT then transferred at least one patent to IPValue, a PAE, which in turn transferred that patent to a subsidiary, Suffolk Technologies, which brought suit against Google and AOL.¹⁹
- In January 2013, Ericsson sold more than 2,000 patents to PAE Unwired Planet, which previously had sued Ericsson’s mobile device competitors, Apple, Google and RIM.²⁰

Recently, the DOJ and the FTC held a joint workshop on PAE activities, which explored how the antitrust laws might apply to certain PAE activities.²¹ Among other topics, panelists debated the outsourcing by Operating Companies of patent portfolios (or parts of portfolios) to PAE enforcement proxies. According to the research of one panelist, “operating companies [can] use or ‘sponsor’ PAEs as a means of imposing costs on rivals and achieving other anticompetitive ends.”²²

To unpack how Operating Company transfers to PAEs can achieve “anticompetitive ends,” it is first necessary to explain why Operating Companies may find it attractive to transfer patents to PAEs—the very entities that inflict on Operating Companies millions of dollars in costs each year.

Why Do Operating Companies Transfer Patents to PAEs?

Operating Companies may transfer patents to PAEs for several reasons. Some appear competitively benign: Where patent holders are under-capitalized, PAE agents willing to fund litigation can help generate cash flows from investments in innovation that a resource-starved innovator cannot.²³ PAE advocates have posited similar justifications for transfers by large, sophisticated, and

¹⁵ See Tom Ewing, *Indirect Exploitation of Intellectual Property Rights by Corporations and Investors: IP Privateering and Modern Letters of Marque and Reprisal*, 4 HASTINGS SCI. TECH. L.J. 1 (2012).

¹⁶ Loek Essers, *Mosaid Subsidiary Sues Apple over Wireless Patents*, Macworld (Mar. 6, 2012), http://www.macworld.com/article/1165717/mosaid_subsidary_sues_apple_over_wireless_patents.html.

¹⁷ See *infra* notes 60 and 61 (citing sources describing transfers).

¹⁸ Steven Musil, *British Telecom Sues Google over Android, Other Services*, CNET (Dec. 18, 2011), http://news.cnet.com/8301-1023_3-57344867-93/british-telecom-sues-google-over-android-other-services/.

¹⁹ Joff Wild, *BT Opts for Patent Privateer Model to Assert Patents Against Google and AOL*, IAM Magazine Blog (Dec. 13, 2012), <http://www.iam-magazine.com/blog/detail.aspx?g=6b4c0cfa-c173-49ff-a343-8d63de33a900>.

²⁰ Dan Graziano, *Ericsson Sold More than 2,000 Patents to a Patent Troll Suing Apple, Google and RIM*, BGR (Jan. 11, 2013), <http://bgr.com/2013/01/11/ericsson-patent-sale-unwired-planet-289522/>.

²¹ See Fed. Trade Comm’n, *Patent Assertion Entity Activities Workshop* (Dec. 10, 2012), <http://www.ftc.gov/opp/workshops/pae/>.

²² Yeh, *supra* note 10, at 2.

²³ Colleen Chien, *Patent Assertion Entities*, Presentation at the DOJ/FTC Patent Assertion Entity Activities Workshop 15–17 (Dec. 10, 2012), available at <http://www.justice.gov/atr/public/workshops/pae/presentations/290073.pdf>.

well-funded Operating Companies. PAEs can help firms manage sprawling patent holdings. Outsourcing part of a vast patent portfolio to a PAE (for example, in exchange for a future royalty stream) might achieve efficiencies. An Operating Company also might exit a business line and no longer need certain patents. Transferring patents to a PAE might enable a firm to recoup its investment, and thereby fuel future innovations.

By contrast, others contend that Operating Companies may at times transfer patents to PAEs for reasons that, depending on the facts, can raise competition-related concerns. We outline three such scenarios below. These by no means exhaust the competition-related concerns that transfers by Operating Companies to PAEs can present.²⁴

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1. Evade MAD or reputational constraints to raise rivals' costs. Operating Companies often patent defensively—to prevent others from patenting an invention or to dissuade competitors from initiating patent suits.²⁵ Defensive patenting thereby can secure a firm's "freedom to operate."²⁶ At times, defensive patenting can lead to what is termed "patent peace": Because rivals each possess patents that implicate one another's products, they enter into cross licenses or (similarly) abstain from suing one another. Some have rightly termed this dynamic the patent equivalent of the mutual assured destruction (MAD) logic of the nuclear arms race.²⁷

Transfers by Operating Companies to PAEs can defeat MAD by disrupting this "risk symmetry." Because a PAE—which makes nothing—does not need licenses from an Operating Company's rival, a PAE transferee lacks the same disincentive to launch a patent suit as the Operating Company transferor. Moreover, PAEs do not fear reputational costs associated with patent assertions. They do not face "customers exerting pressure to settle litigation or shareholders skeptical of patent enforcement," and they are infrequently repeat players in standard-setting organizations, where a reputation as a non-aggressor can increase the likelihood that a firm's technology is included in standards.²⁸ In short, transferring a patent to a PAE can radically alter—indeed increase—incentives to enforce it.²⁹

Operating Companies might seek to sidestep MAD (or reputational constraints) through transfers to PAE proxies to raise rivals' costs. Depending on the facts, the Operating Company transferor may thereby acquire greater market power in a downstream market than it possessed before the transfer. Moreover, evading "patent peace" or undoing incentives to cross license can

²⁴ Other theories, on which we do not focus, can involve collusion. For example, suppose an Operating Company that possesses patents that are substitutes for those already held by a PAE transfers its patents to a PAE and retains a stake in their enforcement. If the transfer increases the PAE's market power in a technology market, the conduct may present a traditional horizontal antitrust concern (and, depending on the facts, may also present the exclusion concerns discussed below). Parallel transfers by firms that own substitute patents to the same PAE could present similar issues. We also do not discuss here how aggregating a large number of patents, whether or not substitutes, might anticompetitively shield weak patents through a mechanism that might be termed "strength in numbers": The more patents a PAE brings under common ownership, the greater the incentive to enforce weak patents.

²⁵ See, e.g., A. Arundel & P. Patel, *Strategic Patenting*, Background Report for the Trend Chart Policy Benchmarking Workshop: New Trends in IPR Policy 3 (June 3–4, 2003), available at http://proinno.intrasoft.be/reports/documents/TCW15_background_paper.pdf.

²⁶ Colleen Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 308 (2010).

²⁷ *Id.* at 333–34 ("In a 'cold war' environment in which players patent and practice related inventions . . . a company's patent portfolio protects it from attacks.").

²⁸ Michael Carrier, *Patent Assertion Entities: Six Actions the Antitrust Agencies Can Take*, CPI ANTITRUST CHRONICLE, Jan. 29, 2013, at 7, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2209521.

²⁹ See, e.g., Ilene K. Gotts & Scott Sher, *The Particular Antitrust Concerns with Patent Acquisitions*, CPI ANTITRUST CHRON., Oct. 1, 2012, at 32 (explicating change in incentives from lack of exposure to countersuit).

impose a deadweight loss on the economy. “[C]ross licenses can solve the complements problem, at least among two firms, and thus be highly procompetitive.”³⁰ If an Operating Company elects instead to arm a PAE to attack its rival, society will lose the benefits cross licensing can create.

Of course, if a rival could easily determine that its competitor has elected to forgo patent peace and instead has initiated patent war through a proxy, the rival could retaliate in kind by outsourcing some of its patents to its own PAE deputy. This prospect, in theory, might preserve MAD. But the veil behind which PAEs operate can make tracing the links between Operating Companies and PAE proxies difficult.³¹ PAEs often operate through holding companies that can mask their IP portfolios.³² PAEs may also assert patents to which they hold exclusive licenses, where “the effect would be similar to owning the patent outright, but the parties would not necessarily record a change of patent ownership with the USPTO.”³³ In sum, Operating Companies can hinder rivals by arming PAE agents that are invulnerable to patent countersuits.

2. Evade F/RAND and other licensing commitments. In the standard-setting context, some firms make promises to license patents on F/RAND terms if their patents are included in—and become essential to the implementation of—a standard (so-called Standard Essential Patents, or SEPs). Outside of the standard-setting context, firms may make F/RAND commitments to induce adoption of proprietary technology as a de facto standard.³⁴ Firms may also make pledges to avoid royalty stacking or to cap the royalties they seek for patents essential to a particular standard. These commitments all are designed to avoid ex post opportunism. As *Rambus*³⁵ and *N-Data*³⁶ teach, when firms renege on these commitments, depending on the facts, the conduct can transgress Sherman Act Section 2 or FTC Act Section 5.

An Operating Company can evade a “no stacking” (or similar) pledge by transferring some, but not all, of its SEPs that pertain to a particular standard to a PAE in exchange for a portion of the PAE’s proceeds from monetizing the patents. Even if the PAE agrees to honor the Operating Company’s commitments, the disaggregation of the previously unified SEP portfolio can enable the Operating Company and its PAE enforcement agents *together* to raise total royalties above the level the Operating Company promised. That is, where, before disaggregation of the portfolio, one entity agreed to charge no more than the cap regardless of the number of patents an implementer needed, after the transfer multiple entities each may seek to charge that amount.

³⁰ Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, in 1 INNOVATION POLICY AND THE ECONOMY 119, 127 (Adam B. Jaffe, Josh Lerner & Scott Stern eds., 2001), available at <http://faculty.haas.berkeley.edu/shapiro/thicket.pdf>.

³¹ Secrecy is not responsible for all unravelings of MAD. An Operating Company might retain some patents to ward off a rival’s suit while outsourcing others to a PAE. Some Operating Companies, however, might be more willing to sacrifice long-term reputational benefits than others, which also can lead to a breakdown of MAD.

³² Tom Ewing & Robin Feldman, *The Giants Among Us*, 2012 STAN. TECH. L. REV. 1, ¶¶ 14, 27 (2012), <http://stlr.stanford.edu/pdf/feldman-giants-among-us.pdf>.

³³ *Id.* ¶ 21.

³⁴ For instance, Microsoft committed to license patents essential to interoperability with its high volume software on FRAND terms and at “low royalty rates.” Microsoft Open Specifications, *Interoperability Principles*, <http://www.microsoft.com/openspecifications/en/us/programs/other/interoperability-principles/default.aspx> (last visited Feb. 8, 2013).

³⁵ Opinion of the Commission, *Rambus, Inc.*, FTC Docket No. 9302 (Aug. 2, 2006), available at <http://www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf>, *rev’d*, *Rambus Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008).

³⁶ Statement of the Federal Trade Commission, *Negotiated Data Solutions LLC*, No. 0510094 (Jan. 23, 2008), available at <http://www.ftc.gov/os/caselist/0510094/080122statement.pdf>.

This problem is exacerbated when an Operating Company divides an SEP portfolio among multiple PAEs. Each may seek royalties up to the cap promised by the Operating Company, along with the Operating Company itself.³⁷ The adverse consequences of employing PAE enforcement proxies to evade a F/RAND commitment or royalty cap include those of ex post patent hold-up generally. By employing PAE privateers, the Operating Company and the PAE collectively can extract greater royalties than the Operating Company's pledge permitted. Moreover, atomizing a previously unified SEP portfolio splits complementary patents (a Cournot Complements problem), which may impair efficiency.³⁸

3. Strategic outsourcing to PAEs to hinder rivals. Yet another strategy involves an Operating Company outsourcing patents to a PAE over which it maintains some influence. Among other mechanisms that create a "Hybrid PAE,"³⁹ Operating Companies and PAEs can enter into contracts that align incentives. For example, an Operating Company might induce a PAE to target the Operating Company's rivals by retaining or securing a broad license to the transferred patents that protects the Operating Company and its customers while sharing a carefully selected list of unlicensed firms (*viz.* rivals) with the PAE transferee.

An Operating Company can combine mechanisms that align incentives with other elements outlined above to hinder rivals. For example, an Operating Company that made a "no stacking" pledge to implementers of its technology might parcel out pieces of a previously-unified SEP portfolio to multiple PAEs subject to contractual commitments that encourage PAEs to target a particular rival, thereby inflicting the very harms that the "no stacking" pledge was designed to avoid.

One commentator has suggested that PAE transfers where Operating Companies assert some control over the PAE's "ability and incentive to exercise market power" should be scrutinized seriously, "particularly when it aligns with the interests of downstream manufacturers that could use the transfer to target rivals."⁴⁰ The Department of Justice's current Assistant Chief for Competition Policy similarly has contended that a transfer "that align[s] [a] PAE's incentives with those of [the] seller" is a possible factor that indicates the PAE transfer deserves antitrust scrutiny.⁴¹

Potentially Troubling Transfer: MOSAID

A recent example of a transfer of patents from an Operating Company to a PAE that raises antitrust concerns is the three-way arrangement between Microsoft, Nokia, and PAE MOSAID

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³⁷ Enforcement targets may assert estoppel and other defenses against efforts to sidestep a no stacking or F/RAND commitment. An Operating Company and its transferee nonetheless might take the position that it comports with their commitments for each to charge up to the previously specified cap (or F/RAND level).

³⁸ See, e.g., Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2014 (2007) (explaining that "as usual with Cournot complements" when "three patents" are "held by separate firms, downstream output is half as much as it would be if a single company owned all three patents").

³⁹ Some have termed PAEs subject to some level of Operating Company influence or control "Hybrid PAEs." Carl Shapiro, Presentation, Patent Assertion Entities: Effective Monetizers, Tax on Innovation, or Both? 4, 22 (Dec. 10, 2012) (slides presented at DOJ/FTC PAE Activities Workshop), available at <http://www.ftc.gov/opp/workshops/pae/docs/cshapiro.pdf>.

⁴⁰ See Carrier, *supra* note 28, at 8.

⁴¹ Jeffrey Wilder, Effects of PAEs on Competition and Innovation 6 (Sep. 27, 2012) (slides presented at ABA Antitrust Section Intellectual Committee teleconference), available at http://www.americanbar.org/content/dam/aba/publications/antitrust_law/20120927_at12927_materials.authcheckdam.pdf.

whereby Nokia transferred a significant patent portfolio, including over 1,200 wireless SEPs, to MOSAID.⁴²

Microsoft and Nokia made unlikely bedfellows. In the 1990s, Nokia spearheaded the open source Symbian mobile operating system as a competitor to Microsoft's Windows Mobile operating system and supported open source software through F/RAND commitments.⁴³ But when Symbian languished, Nokia joined its former adversary by agreeing in 2011 to form an alliance with Microsoft and deploy Windows Phone 7 (WP7) as Nokia's primary operating system.⁴⁴ Nokia acknowledged that the Microsoft alliance "changed its role in the market."⁴⁵ In particular, joining the Windows ecosystem gave Nokia an incentive to induce firms to "abandon Android in favor of WP7" and, indeed, Nokia's CEO declared "war" on Google and Android.⁴⁶ Inducing Nokia to declare "war" on Google benefits Microsoft, according to some, because "Google, with Android, is the biggest threat to Microsoft" and its enduring dominance in desktop-based operating systems.⁴⁷

Acting on their newly aligned incentives, Microsoft and Nokia later in 2011 entered into an agreement with Canadian PAE MOSAID.⁴⁸ Under this arrangement:

- MOSAID obtained some 2,000 Nokia patents, including 1,200 standard-essential wireless patents from Nokia's Core Wireless subsidiary⁴⁹;
- Nokia transferred the patents for a nominal price (\$19,975.00)⁵⁰;
- MOSAID agreed to pay Microsoft and Nokia two-thirds of the royalties it collects from enforcing Nokia's patents, and it agreed "to monetize the Assigned Patents and to maximize the Royalty"⁵¹;

⁴² Mary Jo Foley, *Microsoft Weighs In on Mosaid-Nokia Patent Deal*, ZDNet (Sep. 2, 2011), <http://www.zdnet.com/blog/microsoft/microsoft-weighs-in-on-mosaid-nokia-patent-deal/10523>.

⁴³ See generally Andrew Orlowski, *Symbian, the Secret History: Dark Star[:] How It Almost Never Set Sail*, THE REGISTER (Nov. 23, 2010), http://www.theregister.co.uk/2010/11/23/symbian_history_part_one_dark_star/print.html.

⁴⁴ See Dina Bass, *Microsoft Is Said to Pay Nokia More than \$1 Billion in Deal*, BLOOMBERG (Mar. 7, 2011), <http://www.bloomberg.com/news/2011-03-07/microsoft-is-said-to-pay-nokia-more-than-1-billion-under-software-accord.html>.

⁴⁵ Kevin Fitchard, *Nokia's Elop Declares War on Google, Looks for Recruits (Including Operators)*, CONNECTED PLANET (June 2, 2011), <http://connectedplanetonline.com/mobile-apps/news/nokias-elop-declares-war-on-google-looks-for-recruits-including-operators-0602/>.

⁴⁶ *Id.*; Sarah Reedy, *Nokia Boss Declares War on Android*, LIGHT READING MOBILE (June 2, 2011), <http://www.lightreading.com/mobile-operating-systems/nokia-boss-declares-war-on-android/240129422> ("Fundamentally, we believe that what has happened in the past couple of years was a shift from a battle of devices to a war of ecosystems.").

⁴⁷ Ewan Spence, *The Nightmare that Keeps Microsoft Awake . . . Android on the Desktop*, FORBES (Jan. 12, 2013), <http://www.forbes.com/sites/ewanspence/2013/01/12/the-nightmare-that-keeps-microsoft-awake-android-on-the-desktop/>.

⁴⁸ See Press Release, MOSAID News Releases, *MOSAID Acquires 1,200 Nokia Standards-Essential Wireless Patents and 800 Wireless Implementation Patents* (Sept. 1, 2011), <http://www.mosaid.com/corporate/news-events/releases-2011/110901.php>; Confidential Share Purchase Agreement between Intellectual Property Asset Trust and MOSAID Technologies, Inc. (Sept. 1, 2011) (*Share Purchase Agreement*); Confidential Royalty Participation Agreement between MOSAID Technologies Inc., Core Wireless Licensing S.a.r.l., Nokia Corp. and Microsoft Corp. (Sept. 1, 2011) (*Royalty Participation Agreement*); Directors' Circular Recommending Rejection of the Unsolicited Offer by Wi-LAN Inc. (Sept. 7, 2011). The Share Purchase Agreement and Royalty Participation Agreement are available through the Canadian Securities Administration's SEDAR website. See SEDAR, *Search for Public Company Documents*, http://www.sedar.com/search/search_form_pc_en.htm (last visited Mar. 20, 2013) (search for company name "MOSAID" for the month of September 2011 and follow website instructions).

⁴⁹ Press Release, *supra* note 48.

⁵⁰ *Share Purchase Agreement*, *supra* note 48, § 2.02.

⁵¹ *Royalty Participation Agreement*, *supra* note 48, § 2.1; Foley, *supra* note 42; MOSAID, Annual and Special Meeting of Shareholders, at 25 (Sept. 22, 2011), available at <http://www.mosaid.com/corporate/investor-relations/AGM2011.pdf>.

- MOSAID agreed to a detailed set of confidential royalty protection provisions and milestone payments calculated to maximize the revenue MOSAID obtains from enforcement of these patents⁵²;
- In the event of a change in control of MOSAID or if MOSAID fails to meet its royalty obligations, Microsoft and Nokia may jointly compel MOSAID to transfer these patents to another party for a mere \$10,000.00⁵³; and
- Microsoft retained a license that prevents MOSAID from asserting certain patents against third parties implementing certain Microsoft software in their mobile devices.⁵⁴

In short, Microsoft and Nokia jointly outsourced to a PAE several hundred SEPs assertedly essential to mobile operating system competitors under terms that (i) create significant incentives for PAE MOSAID to act in Microsoft's and Nokia's strategic interests (because Microsoft and Nokia can direct transfer of the patents elsewhere); and (ii) enable Microsoft and Nokia to benefit from the PAE's monetization of the patents. MOSAID, moreover, expects to collect billions from the transferred patents, including from Android licensees. MOSAID predicted that "over the next five years," "companies unlicensed to its portfolio will generate US\$500 billion in mobile device[] revenues."⁵⁵ According to Phil Shaer, MOSAID's Senior VP and General Counsel: "Owning these patents opens up a market for MOSAID that could reach 1 trillion dollars" and MOSAID expects to "be monetizing them for at least a decade."⁵⁶

The Microsoft/Nokia/MOSAID transfer implicates each of the potential harms from Operating Company to PAE transfers sketched above.

1. The MOSAID transfer alters enforcement incentives. If Nokia alone had asserted the transferred patents against Android implementers (and other enforcement targets), Nokia could face patent counter-suits. The threat of such counter-suits might have limited Nokia's ability to enforce the Core Wireless patents. Outsourcing enforcement of part of its SEP portfolio to MOSAID while retaining an interest in the resulting royalty stream enabled Nokia to sidestep this constraint on enforcement and share in the royalties MOSAID anticipates it will extract. Moreover, as further discussed below, the arrangement threatens to raise rivals' costs in circumstances that might hinder competition.

2. The transfer threatens royalty stacking and hold-up. Nokia's SEPs, like many SEPs, are subject to F/RAND commitments made to standard-setting organizations (SSOs). Indeed, Nokia's SEPs are covered by a specific commitment to charge no more than a particular royalty (2 percent) no matter how many Nokia SEPs a licensee needs to implement wireless standards for a par-

[The MOSAID] arrangement threatens to raise rivals' costs in circumstances that might hinder competition.

⁵² *Royalty Participation Agreement*, *supra* note 48, § 2.2.

⁵³ *Id.* § 2.3.

⁵⁴ Microsoft obtains a "worldwide, irrevocable, non-exclusive, perpetual, and fully paid-up license under any Later Acquired Patents to" make and supply its products. *Id.* § 3.1. Microsoft's license extends to its customers' supply "of a combination of a Licensed Product with third-party software, products and services" where "the Licensed Product (or a portion thereof) in such combination meets or performs (in whole or in part) at least one material limitation of such claim." *Id.* § 3.2.

⁵⁵ MOSAID, *Introducing Core Wireless 5*, <http://www.mosaidth.com/core-wireless/IntroducingCoreWireless.pdf> (last visited Sept. 30, 2012).

⁵⁶ Video—MOSAID Acquires 2,000 Nokia Wireless Patents (Sept. 12, 2011), <http://www.youtube.com/watch?v=fS6aQ90M8B0>.

ticular end device.⁵⁷ Nokia appears to have made this 2 percent “no stacking” pledge to induce firms to adopt its proprietary wireless technology over alternatives.⁵⁸

The MOSAID transfer enables Nokia and its PAE transferees to evade this 2 percent cap and thereby may cause the very royalty stacking Nokia promised to avoid. When in Nokia’s hands, the transferred SEPs formed part of a unified wireless patent portfolio. Abiding by its commitment, Nokia could charge no more than 2 percent for a license to the entire portfolio. The transfer to MOSAID, however, divided the portfolio. And once Nokia split the portfolio, even if both Nokia and MOSAID *each* committed to abide by Nokia’s 2 percent royalty cap, both may be free to seek royalties up to that level. Thus, where before the MOSAID transfer Nokia could seek only 2 percent on the portfolio, the transfer may enable Nokia to seek 2 percent and MOSAID to seek 2 percent (which it splits with Nokia and Microsoft). There is no indication that Nokia and MOSAID agreed collectively to honor the 2 percent royalty cap; on the contrary, Nokia’s public statements stressing its lack of control over MOSAID’s enforcement activities are inconsistent with such constraint.⁵⁹

The MOSAID transfer, therefore, may enable abrogation of the “no stacking” pledge that induced firms to adopt a standard incorporating Nokia’s patents. Subsequent transfers of yet other portions of Nokia’s SEP portfolio to PAEs Sisvel⁶⁰ and Vringo⁶¹ threaten to exacerbate the concern by increasing the total royalties that Nokia and PAE transferees can collect on the same portfolio even if Nokia never itself enforces the patents it retains. Nokia’s conduct, therefore, could implicate the patent hold-up concerns that animated *N-Data* and *Rambus*. Moreover, the facts suggest that, had now locked-in firms known *ex ante* that Nokia would break its promise, they might have implemented a different technology.

3. Microsoft and Nokia appear to be employing a PAE to raise rivals’ costs. As discussed, publicly available facts disclose that Microsoft and Nokia exert significant influence over MOSAID’s enforcement of the transferred Nokia patents. MOSAID cannot assert certain patents against devices running mobile versions of Microsoft’s Windows operating system. Of equal significance,

⁵⁷ See Nokia, *Nokia Licensing Policy on Long Term Evolution and Service Architecture Evolution Essential Patents*, Internet Archive (WayBackMachine) (July 2010–Oct. 2010), <http://web.archive.org/web/20101015065029/http://www.nokia.com/press/ipr-information/statement/nokia-licensing-policy-on-long-term-evolution-and-service-architecture-evolution-essential-patents>; see also Eric Stasik, *Royalty Rates and Licensing Strategies For Essential Patents on LTE (4G) Telecommunication Standards*, 2010 LES NOUVELLES 114, 115, 117 (2010), available at <http://www.investorvillage.com/uploads/82827/files/LESI-Royalty-Rates.pdf> (quoting Nokia as stating that its royalty for LTE devices will be “in a range of 1.5 percent from the sales price of an end-user device.”).

⁵⁸ To assuage concerns that patents might inhibit adoption of their proposed standard, Nokia and others “formed a licensing framework for their 4G patents called Long term Evolution (LTE) in direct competition with Intel’s Wimax.” *Nokia and Sony Ericsson Developing 4G Wireless*, TECHRADAR (Apr. 16, 2008), <http://www.techradar.com/us/news/internet/nokia-and-sony-ericsson-developing-4g-wireless-319621>. Nokia’s “no stacking” pledge resulted from these developments. See Press Release, Nokia, *Wireless Industry Leaders Commit to Framework for LTE Technology IPR Licensing* (Apr. 14, 2008), <http://press.nokia.com/2008/04/14/wireless-industry-leaders-commit-to-framework-for-lte-technology-ipr-licensing/>; *Nokia Licensing Policy on Long Term Evolution and Service Architecture Evolution Essential Patents*, *supra* note 57.

⁵⁹ According to Nokia’s Chief IP Officer, Nokia has “absolutely no operational involvement [in] or any level of control” of MOSAID’s enforcement activities. Paul Melin, Chief Intellectual Property Officer, Nokia, *Patent Assertion Entity Activities Workshop—Session 2/4* (at 1:21:25) (Dec. 10, 2012) (“When we divest patents, we truly divest them. So, we have absolutely no operational involvement or any level of control in this. They are MOSAID’s patents; they have been sold.”), available at <http://www.ftc.gov/video-library/index.php/ftc-events/patent-assertion-entity-activities-session-24/2028431449001>.

⁶⁰ Sisvel News, *Sisvel Acquires over 450 Nokia Patents, Including over 350 Patents Essential to Wireless Standards* (Jan. 12, 2012), <http://www.sisvel.com/index.php/submit-patents/136-uncategorised/latest-news-left/260-sisvel-acquires-over-450-nokia-patents-including-over-350-patents-essential-to-wireless-standards>.

⁶¹ Vringo, Current Report Form 8-K (Aug. 10, 2012), http://sec.gov/Archives/edgar/data/1410428/000114420412045768/v321254_8k.htm (“Thirty-one of the 124 patent families acquired have been declared essential by Nokia to wireless communications standards.”).

Microsoft and Nokia can ship the patents to a third party if MOSAID fails to meet revenue expectations, a lever Microsoft and Nokia would lack had Nokia sold MOSAID the patents outright or obtained a lump sum royalty. Because, presumably, Microsoft and Nokia can waive this provision, MOSAID has an incentive to act in Microsoft's and Nokia's interests. Those interests, as explained, include seeking to raise the costs of Android licensees, which threaten both Microsoft's monopoly power and sales of Nokia's Windows Mobile phones. Indeed, because Microsoft and Nokia retain certain licenses to the transferred patents, Android licensees comprise MOSAID's most obvious enforcement targets (along with Apple).

Put differently, Microsoft and Nokia armed a PAE with 1,200 SEPs under circumstances where (i) contractual provisions align the PAE's incentives with Microsoft's and Nokia's; (ii) those incentives include raising the costs of implementing Android, because Android threatens both Microsoft's and Nokia's interests; (iii) the PAE lacks the same constraints on enforcement (e.g., the 2 percent cap; counterclaim risk) as Nokia confronted, and thereby is better positioned than Nokia to inflict higher costs on Android OEMs; and (iv) such PAE enforcement threatens royalty stacking that not only raises costs but also impedes efficiency.

It is little wonder that a senior Microsoft executive candidly remarked that the MOSAID transfer marked "an effective way" "to unlock the considerable value of [Nokia's] IP portfolio."⁶² The "value" to Microsoft appears to include the strategic benefit of impeding Android by raising the costs of its implementation. Indeed, low-cost Android devices are particularly concerning to Microsoft, because consumers may be abandoning PCs for low-cost tablets and other Android-run devices.⁶³ Put otherwise, through the tri-partite MOSAID transfer, Microsoft might raise the costs of implementing Android and thereby maintain its PC operating system dominance.

How Antitrust Might Constrain Operating Company Transfers to PAEs

The above discussion of the mechanisms by which PAE transfers can threaten to hinder competitors and consumers suggest several potential antitrust theories that might constrain Operating Company transfers to PAEs:

1. A PAE transfer may comprise exclusionary conduct under Section 2. In some circumstances, outsourcing patent enforcement to PAEs might form part of a scheme to maintain or obtain monopoly power. The above examples suggest two distinct Section 2 theories.

First, when a transfer to a PAE evades a F/RAND or no stacking commitment made to an SSO (or others), and the commitment the transfer evades induced adoption of the transferor's technology over alternatives, the transfer can implicate the "patent hold-up" concerns articulated in *Broadcom*⁶⁴ and *Rambus*. Put differently, the transfer enables the defendant wrongly to obtain monopoly power in a technology market. Such claims, of course, face a number of hurdles including, among others: (i) demonstrating (as *Rambus* requires) that the SSO (or others) would have selected different technology in the "but for" world; and (ii) showing that the conduct facilitates evasion of the original commitment. The MOSAID transfer is striking because the facts might suggest that both obstacles could be overcome. Nokia made a "no stacking" pledge to prevail in a

⁶² Foley, *supra* note 42.

⁶³ Cf. *Android's Market Share Increases & Price Decrease*, Mitek Mobile (Apr. 20, 2011), <http://miteksystems.wordpress.com/2011/04/20/androids-market-share-increases-prices-decrease/>.

⁶⁴ *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297 (3d Cir. 2007).

battle against an alternative standard; and circumstances suggest that Nokia and its PAE transferees have not agreed collectively to honor the 2 percent royalty cap.

Second, a PAE may assist a monopolist in hindering a product market rival and thereby maintain or obtain monopoly power in violation of Section 2. The MOSAID transfer illustrates a putative multi-faceted exclusionary strategy. One element includes the above-described potential of the transfer to MOSAID to evade Nokia's F/RAND commitments and thereby increase the effective costs of licensing Nokia's SEPs. Contractual provisions that appear to give MOSAID an incentive to act in Microsoft's and Nokia's strategic interests by aggressively targeting Android OEMs comprise another element. Yet another is that MOSAID does not face the threat of counterclaims Nokia confronted and, therefore, has a greater ability to seek royalties that raise the costs of implementing Android than did Nokia.

Of course, these facts alone would not make out a violation of Section 2. A coherent theory would need to link the transfer's raising of rivals' costs to the maintenance of monopoly power. The threat Android poses to Microsoft's PC Operating System dominance, and how raising Android's costs may delay erosion of that power, could supply such a link. Moreover, a Section 2 violation requires showing exclusionary conduct that is not fully justified by procompetitive efficiencies. It is difficult to see the benefit to consumers of the MOSAID transfer. Evading the "no stacking" pledge produces inefficiency by separating complements (a Cournot Complements problem⁶⁵), and MOSAID's greater ability to monetize Nokia's patents might impair a rare serious rival to Microsoft's continued dominance in PC Operating Systems. Giving Nokia (and Microsoft) a higher return on the Nokia patents may benefit Nokia, but it is not clear that the net effect is to encourage innovation. On the contrary, because Nokia's conduct arguably betrays its F/RAND commitment, the conduct may deter innovation.⁶⁶

2. PAE transfers may be challenged under Section 7 of the Clayton Act. Perhaps the most natural mechanism by which to challenge Operating Company transfers to PAEs is Clayton Act Section 7. A non-PAE example provides a template for applying Section 7 to police Operating Company/PAE transfers. In 2010, the Antitrust Division blocked Microsoft from acquiring Novell's patents to which Microsoft already had a license. According to the DOJ, the only reason for Microsoft to acquire the patents was for offensive enforcement against open source software, including Linux (on which Android is based). The Division restricted Microsoft's rights to the patents "to protect competition and innovation in the open source software community."⁶⁷

The key to understanding the Division's action against Microsoft lies in how the transfer from Novell changed enforcement incentives. Novell possessed incentives to support the open source community. Microsoft, as explained, had quite different incentives: to protect Windows (and Office) from emerging open source threats. Which firm held the patent, in other words, had antitrust significance. The transfer accordingly raised competitive concerns because it placed the patents in

⁶⁵ See Lemley & Shapiro, *supra* note 38, at 2013–15 ("The theory of Cournot complement teaches us that the royalty stacking problem is likely to be worse the greater the number of independent owners of patents that read on a product.")

⁶⁶ The MOSAID arrangement could present a rare instance when Section 2's prohibition of conspiracies to monopolize has independent significance. Only Microsoft likely could be held liable under Section 2 on a theory of monopoly maintenance in PC operating systems. However, Nokia—as a new stakeholder in the Windows ecosystem—might share Microsoft's incentive to hinder Android. *Cf.* Perington Wholesale, Inc. v. Burger King Corp., 631 F.2d 1369 (10th Cir.1979) (sustaining complaint for conspiracy to monopolize claim where supplier assertedly shared downstream firm's incentive to maintain its monopoly).

⁶⁷ Press Release, U.S. Dep't of Justice, CPTN Holdings LLC and Novell Inc. Change Deal in Order to Address Department of Justice's Open Source Concerns (Apr. 20, 2011), available at <http://www.justice.gov/opa/pr/2011/April/11-at-491.html>.

the hands of a firm with incentives to raise open source costs to protect its market power, an incentive the transferring firm lacked. This implements in the patent context the well-settled principle (typically applied in a vertical setting) that antitrust analysis must consider changes in the ability or incentive to exclude rivals.⁶⁸

An Operating Company's transfer of patents to a PAE similarly can change enforcement incentives in a manner that might harm competition in an adjacent product market. The transfer can, depending on market structure and the degree to which costs are raised, enhance the Operating Company's ability through its PAE proxy to wield a patent to hinder or exclude rivals and thereby gain incremental market power. In the language of the DOJ/FTC Merger Guidelines, the transfer may unlawfully "facilitate [the] exercise" of "market power."⁶⁹ The MOSAID transfer might implicate Section 7 for the same reasons that it implicates Section 2.

An Operating Company's transfer of patents to a PAE similarly can change enforcement incentives in a manner that might harm competition in an adjacent product market.

3. Section 1 unreasonable restraint of trade. Transfers unlawful under Section 7 can also be recast as violations of Sherman Act Section 1. Differences in the claims include that both parties might be liable (sellers can violate Section 1 but not Section 7), as well as the facts required to make out a prima facie liability case. Some have also suggested that certain PAE transfers may run afoul of Section 1's per se rule. According to one commentator, that "Nokia and Microsoft pooled their patents and enlisted [MOSAID] to use the patents to sue competitors" could present a Section 1 concern similar to a pooling arrangement the Supreme Court declared per se illegal in *Singer Manufacturing Co.*⁷⁰

4. The FTC might challenge certain transfers to PAEs under Section 5 of the FTC Act. The FTC has recently aggressively deployed FTC Act Section 5 to combat conduct perceived to breach or evade F/RAND commitments. In *N-Data*, the Commission concluded that a patent transferee violated Section 5 of the FTC Act when it failed to honor its transferor's licensing commitment to license at low, set royalty rates and the likely consequence was to increase prices to consumers and impair standard setting.⁷¹ Applying (or depending on one's view, expanding) *N-Data*'s underlying rationale, the FTC might condemn Operating Company transfers to PAEs that evade "no stacking" or similar commitments when, as in *N-Data*, the result is to raise licensing fees and impair the standard-setting process. Once again, Nokia's atomizing of its SEP portfolio to multiple PAEs—where it appears there is no mechanism for the firms collectively to honor the 2 percent royalty cap—represents the type of scenario that might warrant the FTC's scrutiny.

Conclusion

Operating Company transfers to PAEs can present antitrust concerns. Operating Companies can raise rivals' costs by transferring patents to PAE agents who face fewer enforcement constraints. Transfers to PAEs can threaten patent hold-up by facilitating evasion of F/RAND or no stacking

⁶⁸ See, e.g., U.S. DEP'T OF JUSTICE, ANTITRUST DIVISION POLICY GUIDE TO MERGER REMEDIES 5 (2011) (explaining that "vertical mergers can create changed incentives and enhanced ability of the merged firm to impair the competitive process").

⁶⁹ U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines § 1 (2010), available at <http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf>.

⁷⁰ Carrier, *supra* note 28, at 10 (citing *United States v. Singer Manufacturing Co.*, 374 U.S. 174 (1963)). Carrier likened the MOSAID case to *Singer*, where "the Supreme Court struck down an arrangement in which three companies pursued a 'common purpose' to suppress competition 'through the use of [a] patent.'" *Id.* (quoting *Singer*, 374 U.S. at 194–95). The analogy to *Singer* would be more compelling if, absent the alliance, Nokia and Microsoft would have continued to compete in mobile operating systems. The MOSAID agreement, then, would arguably reflect competitors agreeing to transfer Nokia's patents to a party better situated to enforce them against a common rival.

⁷¹ Negotiated Data Solutions, FTC No. 0510094, Analysis of Proposed Consent Order to Aid Public Comment 5 (Jan. 23, 2008), <http://www.ftc.gov/os/caselist/0510094/080122analysis.pdf>.

commitments. Contractual mechanisms that align a PAE's incentives with those of an Operating Company or its allies can form part of an exclusionary stratagem. As ever in antitrust, separating anticompetitive from benign patent transfers turns on a fact-driven analysis.

Not every (or perhaps not even the majority of) Operating Company transfer to a PAE raises significant antitrust concerns. But not every such transfer is competitively benign. Operating Companies transferring patents to PAEs, therefore, must consider the potential antitrust constraints on their activities. ●