



AN AMERICAN PERSPECTIVE FROM THE CROSSROADS OF ANTITRUST AND INTELLECTUAL PROPERTY

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In the modern era of rapid technology development, the crossroads of antitrust and intellectual property, have received increasing attention and become a remarkably colorful center of debate. The heated and controversial competition issues in the current patent wars (or, possibly mutually assured destruction if it spirals out of control) include, but are not limited to: “pay-for-delay” and other tricks to delay entry of generic drugs, adherence to F/RAND licensing commitment, industry standard setting and standard essential patents (SEPs), sales and import bans on alleged infringing products, as well as patent assertion entities (PAEs, which has another unfavorable name as patent trolls). In point of fact, enormous progress was made in the US in 2012 not only in bringing these issues to public attention, but in actually putting the building blocks in place for major long-term improvements.

A Brief Overview of the Patent System in the US

To have a better comprehension of the above ongoing issues, it is important to first understand the basic aspects of the patent system. Modern patent rights in the US have their root in the Patent and Copyright Clause of the Constitution, which empowers the Congress to “promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”¹ In exchange for rewarding and facilitating innovation, creators of science and useful arts are granted exclusive rights with limited term and carefully crafted scope.² An inventor has to fully disclose the details of his or her invention when applying for a patent³ to enable further innovation, and after the patent expires, the once patented item will go into the public domain and the public can enjoy it freely. The public notice function is important and patents can be seen as social contracts with the public. The cause of almost all current competition

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¹ U.S. CONST. art. I, § 8, cl. 8.

² *Id.*

³ “The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.” 35 U.S.C. § 112.

issues lies in the misconception of this mechanism: merely focusing on the exclusivity part of the patent system, many aggressive patent holders and applicants have ignored or downplayed the “public benefit” part. As a result, more and more patents are used to exclude competitors and stifle market competition, but not to facilitate innovation and benefit the public.

The Institutional Problem

What makes the problems more complex is that there are at least three different legal regimes sharing in the shaping of competition in the patent world: intellectual property (specifically, patents), antitrust, and international trade.⁴ Each institution is independent, with “its own regulatory institutions, its own objectives, values, and procedures, and its own occupational sociology.”⁵ They do overlap in the real world, but few professionals could say that they really understand all the crossings.

Innovation plays a key role in economic growth. Intellectual property is the “global currency for creating value for products and services, for all markets.”⁶ With growing recognition of the importance of innovation and intellectual property, the US in 1982 created a specialized federal appellate court for patent law – the Federal Circuit. It has the reputation of aggressively promoting patent rights.⁷ Additionally, the scope of patentable subject matter now includes controversial and maybe “overly broad” business method patents and software patents,⁸ and a company may not give up its effort to secure a patent over one invention despite multiple rejections by the United States Patent and Trademark Office (PTO). Moreover, the rapid evolution of high technology depends on large quantities of patents. For example, a smartphone may have more than 200 patents in it,⁹ much more than an average consumer can notice. All these developments may drive patents away from their original goal and sometimes raise conflict with antitrust policy objectives.

Antitrust advocates free market competition. Although antitrust law recognizes patents as a form of lawful exclusivity and the two legal regimes share a commitment to promoting innovation, many antitrust experts remain skeptical of aggressive pursuit and assertion of such rights. Although the US antitrust law does not have an “abuse of dominant position” provision such as plays an important role in the European Union (EU),¹⁰ the anti-monopoly provisions of the Sherman Act and “unfair

⁴ Albert A. Foer, *The Latest Issues at the Crossroads of Antitrust and IPR*, 1, available at <http://www.antitrustinstitute.org/~antitrust/sites/default/files/AAIIPKoreaspeechUSversion.pdf>.

⁵ *Id.*

⁶ David Kappos, Director, U.S. Patent & Trademark Office, Keynote Address at the Center for American Progress: An Examination of Software Patents (Nov. 20, 2012), available at http://www.uspto.gov/news/speeches/2012/kappos_CAP.jsp.

⁷ Foer, *supra* note 4, at 2.

⁸ Susan J. Marsnik & Robert J. Thomas, *Drawing a Line in the Patent Subject-Matter Sands: Does Europe Provide a Solution to the Software and Business Method Patent Problem*, 34 B. C. INT'L & COMP. L. REV. 227, 228–29 (2011).

⁹ Lindsey Gilroy & Tammy D'Amato, *How Many Patents Does It Take to Build an iPhone?*, INTELLECTUAL PROP. TODAY, available at <http://www.iptoday.com/issues/2009/11/articles/how-many-patents-take-build-iPhone.asp>.

¹⁰ The Treaty on the Functioning of the European Union, art. 102.

methods of competition” as well as “unfair acts and practices” provisions of the Federal Trade Commission Act may be used to police patent practices that might be anticompetitive. We will discuss more details on this in the next few sections.

The third legal regime is international trade. Globalization of corporations and trade, as well as the expanding role of the World Trade Organization (WTO) bring the crossroads to an international stage.¹¹ The United States International Trade Commission (ITC) has authority to issue import bans on infringing products. Also, exceptionally broad extra-territorial reach of US antitrust law and competition policy enables the US to reach more and more foreign conduct.¹² In *Minn-Chem, Inc. v. Agrium Inc.*, interpreting the Foreign Trade Antitrust Improvements Act (FTAIA), the U.S. Court of Appeals for the Seventh Circuit held that the Sherman Act applies to foreign conduct that proximately causes an effect (contrary to having an immediate consequence, which is much narrower) on domestic commerce.¹³ There is still controversy over the interpretation of the peculiarly-worded FTAIA. However, if the Seventh Circuit’s reading becomes controlling, foreign pricing conduct with respect to a product in a global market can be risky, for it “could easily be interpreted to have predictable and foreseeable ripple effects on domestic United States commerce” and thus be subject to antitrust scrutiny in the US.¹⁴

A particularly noteworthy issue in the international trade context is the role of anticompetitive government actions that may cause serious market distortions. In the EU, Article 87 of the EC Treaty addresses state subsidies in restraint of trade.¹⁵ In China, the new Anti-Monopoly Law has a whole chapter on prohibitions of anticompetitive government actions.¹⁶ However, in the US, both local and foreign government actions are generally immune from competition law.¹⁷ With respect to foreign government actions, the foreign sovereign compulsion defense provides that, if the anticompetitive conduct in question is compelled by a foreign government, the defendant will receive immunity from the US antitrust law even if such conduct has direct effect on the US market.¹⁸ To successfully raise this defense, a defendant must be actually compelled by the foreign government to engage in the anticompetitive conduct.¹⁹ Despite the high evidentiary standard, foreign state-owned enterprises (SOEs), especially SOEs in China, may still escape antitrust scrutiny and pose a notable threat to a free international market.

¹¹ Foer, *supra* note 4, at 2.

¹² *Id.*

¹³ *Minn-Chem, Inc. v. Agrium Inc.*, 683 F. 3d 845 (7th Cir. 2012).

¹⁴ James M. Pearl & Alicia Hancock, *Unanimous En Banc Seventh Circuit Decision Expands Extraterritorial Reach of U.S. Antitrust Laws*, O’MELVENY & MYERS LLP (June 27, 2012), available at <http://www.omm.com/unanimous-en-banc-seventh-circuit-decision-expands-extraterritorial-reach-of-us-antitrust-laws-06-27-2012/>.

¹⁵ The EC Treaty, art. 87.

¹⁶ Anti-Monopoly Law of the People's Republic of China (promulgated by the Standing Comm. Nat’l People's Cong., Aug. 30, 2007, effective Aug. 1, 2008).

¹⁷ *Cali. Retail Liquor Dealers Ass’n v. Midcal Aluminum, Inc.*, 445 U.S. 97, 105 (1980).

¹⁸ *In re Vitamin C Antitrust Litig.*, 810 F. Supp. 2d 522, 540–41 (E.D.N.Y. 2011).

¹⁹ *Id.*

The problem can become extremely complex when all four elements, anticompetitive conduct, government action, intellectual property rights and international trade, are present. Currently, most of the world's cellular network standard is still 3G, and most of the world's wireless carriers are using one of the two 3G technologies, WCDMA or CDMA2000, both of which are standard technologies and have been adopted by the relevant standard setting organizations.²⁰ However, there is an alternative but incompatible standard technology, TD-SCDMA, which was acquired and has been developed by the Chinese government.²¹ To avoid paying high royalties to western patent holders, the Chinese government required China Mobile, an SOE which is also the largest carrier in the world, to use the TD-SCDMA technology.²² China Mobile is the only carrier in the world using this technology. Every cellphone manufacturer would want to reach China Mobile's users, but in order to do so, they would have to make changes to their existing models so that they can run at full capability on the TD-SCDMA network, which will raise their costs.²³ Companies such as Samsung, Motorola and Nokia have chosen to cooperate with China Mobile, absorbing the remodeling cost in exchange for a share of China Mobile's user market.²⁴ However, negotiations over years between China Mobile and Apple have yet yielded no positive result, even though Apple wants access to China Mobile's users and the users want the iPhone.²⁵ Admittedly, in such a deadlock, each side has some legitimate and honest concerns. However, it is still unfair for consumers to bear the ultimate expense.

It is important to recognize the interaction among intellectual property, antitrust and international trade, especially in light of the dramatic expansion of intellectual property rights. Both the US and Japan also need to reconcile the three legal regimes and find better ways to systematize and coordinate policy. Cooperation on the international level is necessary too, because all countries and regions share the same interests at stake here, including facilitating innovation and economic growth, preserving healthy market competition, protecting consumer welfare, and lowering trade barriers. Unfortunately, the world's institutions do not seem to be appropriately structured for optimal policies.

²⁰ Janet Ong, *China Picks WCDMA, CDMA2000 as 3G Mobile Standards*, BLOOMBERG, May 16, 2007, <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a8NwYqsuy3U>.

²¹ Shanker A. Singham, *Freeing the Global Market: How to Boost the Economy by Curbing Regulatory Distortions* 7–8 (Council on Foreign Relations Press, Working Paper, 2012), available at <http://www.cfr.org/economics/freeing-global-market-boost-economy-curbing-regulatory-distortions/p29123>.

²² *Id.* The problems of high switching cost and lock-in effect will become less serious if there is government subsidy.

²³ *Network Access License for TD-SCDMA Terminal Information System*, TD FORUM, <http://www.td-forum.org/en/10/10.asp>.

²⁴ *Id.*

²⁵ Melanie Lee, *Apple CEO Visits China for Second Time in Less Than a Year*, REUTERS, Jan. 8, 2013, <http://www.reuters.com/article/2013/01/09/us-apple-china-ceo-idUSBRE90804520130109>.

Current Issues in Debate

Introduction: Patent Wars Everywhere

Judge Richard Posner holds a pragmatic view on the US patent system: he argues that the need for patent protection varies in different industries.²⁶ The need can be illustrated by a ratio – the cost of inventing divided by the cost of copying. The higher this ratio is in an industry, the more patent protection is needed there.²⁷ One extreme is the pharmaceutical industry, where the cost of inventing is high while the cost of copying is low, and patent protection is crucial there.²⁸ Another extreme is the software industry, where the cost of inventing is relatively low while the cost of copying is commensurate, and in his opinion, 20-year patent protection may be a waste of resources there.²⁹

Currently, the unfortunate reality in the US is that patent protection is uniform in every industry, and patent wars that are arguably unjustified and unarguably expensive in terms of time and money, happen in many industries. Apple's Steve Jobs swore in early 2010 after Apple began its infringement suits against its major competitors, "I will spend my last dying breath if I need to, and I will spend every penny of Apple's \$40 billion in the bank, to right this wrong. I'm going to destroy Android, because it's a stolen product. I'm willing to go thermonuclear war on this."³⁰ When meeting with Google's then CEO, Mr. Jobs emphasized, "I don't want your money. If you offer me \$5 billion, I won't want it. I've got plenty of money. I want you to stop using our ideas in Android, that's all I want."³¹ Sadly, Mr. Jobs died not long after.

Google itself is not an innocent victim either. For two years, the Federal Trade Commission (FTC) investigated Google for its alleged anticompetitive practices, namely whether Google abuses its market power by favoring its own services over rivals in search results.³² During the investigation, the FTC also became concerned about Google's practices with respect to standard essential patents (SEPs).³³

²⁶ Paul R. Michel, Richard Posner, Adam Mossoff & Dean A. Reuter, *Is the Patent System Working or Broken? A Discussion with Judges Posner and Michel – Podcast*, THE FED. SOC'Y (Dec. 19, 2012), <http://www.fed-soc.org/publications/detail/is-the-patent-system-working-or-broken-a-discussion-with-judges-posner-and-michel-podcast>.

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ Charles Arthur, "Steve Jobs Swore to Destroy Android", THE GUARDIAN, Oct. 21, 2011, <http://www.guardian.co.uk/technology/2011/oct/21/steve-jobs-destroy-android/print>.

³¹ *Id.*

³² Edward Wyatt, *Citing Logistics, F.T.C. Pushes Antitrust Inquiry against Google into January*, N.Y. TIMES, December 19, 2012, http://www.nytimes.com/2012/12/20/technology/ftc-pushes-antitrust-inquiry-against-google-into-january.html?pagewanted=1&_r=0&adxnnl=1&adxnnlx=1356627138-Hexp7eK8k4l7m8bMRkvg.

³³ Sara Forden, *Google Said Near Settlement with FTC over Patents Case*, BLOOMBERG, Dec. 12, 2012, <http://www.bloomberg.com/news/2012-12-11/google-said-near-settlement-with-ftc-over-patents-case.html>. A standard-essential patent is a patent that must be used to comply with a technical standard. Carl Shapiro, *Navigating the*

The investigation ended on January 3, 2013 without any formal major charge with respect to Google's search and advertising practices. The FTC accepted Google's offer to "give online advertisers more flexibility to manage ad campaigns with rival websites, and [to] take steps to refrain from 'misappropriating' online content from rivals."³⁴

In the patent matter, the FTC filed a complaint stating that Google's conduct violated Section 5 of the Federal Trade Commission Act. In the accompanying consent order, Google agreed to license its SEPs to competitors on F/RAND terms and not to seek injunctions against them subject to several exceptions to that prohibition.³⁵ The patent settlement has been called a "landmark enforcement action."³⁶ It reduces the confusion and uncertainty in the industry with respect to the use of SEPs.³⁷ When the Justice Department was investigating and approving Google's purchase of Motorola, it obtained assurances from Google on F/RAND licensing of Motorola's SEPs, but later Motorola refused to license its standard technologies and sought injunctions against its rivals. The FTC completed the SEP task against Google with this consent decree. But Google's competitors are still not satisfied.³⁸

Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting, in 1 Innovation Policy and the Economy 119, 134–35 (Adam B. Jaffe et al. eds., 2000).

³⁴ Amir Efrati & Brent Kendall, *Google Dodges Antitrust Hit*, WALL ST. J., Jan. 3, 2013, <http://online.wsj.com/article/SB10001424127887323874204578219592520327884.html>; *Google Agrees to Change Its Business Practices to Resolve FTC Competition Concerns In the Markets for Devices Like Smart Phones, Games and Tablets, and in Online Search*, FED. TRADE COMM'N, <http://www.ftc.gov/opa/2013/01/google.shtm>. Although it seems like a slap on the wrist, supporters of this decision argued that the FTC reached the right balance between antitrust scrutiny and free press principles under the First Amendment. See Bruce D. Brown & Alan B. Davidson, *Is Google Like Gas or Like Steel?*, N.Y. TIMES, Jan. 4, 2013, <http://www.nytimes.com/2013/01/05/opinion/is-google-like-gas-or-like-steel.html>. Sen. Ron Wyden, D-Ore, said that he was planning a bill which would expand the US antitrust law to ensure internet neutrality. Melissa Lipman, *Sen. Plans Antitrust Bill on Net Neutrality*, LAW360 (Jan. 10, 2013), <http://www.law360.com/competition/articles/406282/sen-plans-antitrust-bill-on-net-neutrality>. Other regulators looking into Google's alleged anticompetitive behavior include state attorneys general and the EU. Wyatt, *supra* note 32; Edward Wyatt & James Kanter, *U.S. Inquiry of Google Is Expected to Press on*, N.Y. TIMES, Dec. 18, 2012, <http://www.nytimes.com/2012/12/19/technology/google-wins-time-from-eu-antitrust-enforcer.html>. The EU seems to have a stronger case as Google enjoys a higher market share in Europe and Brussels has a more powerful weapon in its competition law: abuse of dominant position. Wyatt & Kanter, *supra* note 39. Although the AAI did not take a position during the investigation, it applauds the efforts the FTC has made as well as the patent settlement and acknowledges the complexity of the problem. It also urges the two antitrust watchdogs to always work together and oversee the search market closely. Albert A. Foer, *Statement on FTC and Google by AAI President Bert Foer*, AM. ANTITRUST INST., <http://www.antitrustinstitute.org/~antitrust/content/statement-ftc-and-google-aii-president-bert-foer>.

³⁵ Efrati & Kendall, *supra* note 34.

³⁶ Steve Lohr, *On Google, F.T.C. Set Rules of War over Patents*, N.Y. TIMES, Jan. 4, 2013, http://www.nytimes.com/2013/01/05/technology/in-google-patent-case-ftc-set-rules-of-engagement-for-battles.html?_r=0.

³⁷ *Id.*

³⁸ They have already started lobbying the Justice Department to take the case after the FTC dropped it, as it did in the famous Microsoft case last century, but it seems unlikely that it will act this time. Diane Bartz, *Google Critic Disappointed with FTC, Meet with Justice*, REUTERS, Dec. 6, 2012, <http://www.reuters.com/article/2012/12/06/net-us-google-ftc-doj-idUSBRE8B51K620121206>. Microsoft pointed out to a "loophole" in the settlement that Google may seek for injunctive relief against a potential licensee if the licensee itself first sues Google for an injunction alleging SEP infringement. Microsoft insisted that this exception was unjustified because "two wrongs don't make a right." Ryan

Patent wars do not exist only between information technology giants, nor are they only targeted at competitors. Monsanto, the company which dominates the soybean seed market, has extended its fire to farmers, or put it in another way, its consumers. The company alleges that its patent rights extend to the second generation seeds and farmers are not allowed to plant soybeans with the new generation of seeds.³⁹ The Supreme Court agreed to hear the case to decide when Monsanto's patent rights exhaust.⁴⁰ Interestingly, a few days after the Court granted certiorari, the Justice Department quietly closed its investigation in Monsanto without saying a word,⁴¹ leaving up in the clouds questions about transparency within the agency as well as concerns about concentration and misbehavior in the seed industry.⁴²

And all the above are only a prelude to the illustration of complex issues surrounding the crossroads of antitrust and intellectual property.

Pay-for-Delay and Generic Drug Competition

Competition issues also exist in the pharmaceutical industry where patents are essential. Patents are a must because the investment needed to support invention of a new drug is high, the patent term will run from when the drug is still being tested, which may be long before it is launched, and the cost of copying such an invention is relatively low.⁴³ But these concerns may also make branded drug makers worry more about new entry and have more incentive to exclude rivals, especially the generic ones that they consider to be free riders. They have developed several strategies to delay entry of generic drugs. A principal one is called "pay-for-delay" settlements or reverse payment settlements. The key competition issue presented by this practice is: to what extent should it be illegal for a branded pharmaceutical manufacturer to settle litigation with a generic new entrant by agreeing to

Davis, *Microsoft Concerned by 'Loophole' in FTC-Google Patent Deal*, LAW360 (Jan. 10, 2013), <http://www.law360.com/competition/articles/406233/microsoft-concerned-by-loophole-in-ftc-google-patent-deal>. FTC Commissioner Rosch also expressed a similar concern in his concurring statement. In the Matter of Motorola Mobility LLC & Google Inc., Separate Statement of Commissioner Rosch, Fed. Trade Comm'n (2013), 1 n.1, *available at* <http://www.ftc.gov/os/caselist/1210120/130103googlemotorolaroschstmt.pdf>.

³⁹ Greg Stohr, *Monsanto Seed Patent Case Gets US Supreme Court Review*, BLOOMBERG BUSINESSWEEK, Oct. 5, 2012, <http://www.businessweek.com/news/2012-10-05/monsanto-seed-patent-case-gets-u-dot-s-dot-supreme-court-review>.

⁴⁰ *Id.* The AAI Argues in favor of patent exhaustion. See Brief of Amici Curiae the American Antitrust Institute, National Farmers Union, Food & Water Watch, Organization for Competitive Markets, & National Family Farm Coalition in Support of Petitioner, *Bowman v. Monsanto Co.*, No. 11-796 (2012), *available at* <http://www.antitrustinstitute.org/~antitrust/sites/default/files/11-796%20tsac%20American%20Antitrust%20Institute%20et%20al.-1.pdf>.

⁴¹ Ian Berry & David Kesmodel, *U.S. Closes Antitrust Investigation into Seed Industry, Monsanto*, WALL ST. J., Nov. 16, 2012, <http://online.wsj.com/article/SB10001424127887324735104578123631878019070.html>.

⁴² *Lack of Transparency in the Closing of DOJ's Investigation into Monsanto's Transgenic Seed Practices Disappoints Antitrust Advocates*, AM. ANTITRUST INST. (Nov. 21, 2012), <http://www.antitrustinstitute.org/~antitrust/content/lack-transparency-closing-doj%E2%80%99s-investigation-monsanto%E2%80%99s-transgenic-seed-practices-disappoin>.

⁴³ Richard A. Posner, *Why There Are Too Many Patents in America*, THE ATLANTIC, July 12, 2012, <http://www.theatlantic.com/business/archive/2012/07/why-there-are-too-many-patents-in-america/259725/#>.

make substantial payment to the generic competitor in return for that competitor's agreement to delay its market entry for several years?

Pay-for-delay practices began to emerge in the context of the Hatch-Waxman Act, which, ironically, was designed to encourage early entry of generic drugs into patent-protected markets.⁴⁴ A generic drug maker may file its application with the Food and Drug Administration (FDA) declaring, among other things, that its generic drug is not infringing an existing patent.⁴⁵ The branded drug manufacturer often objects by filing a patent infringement complaint. The cases are often settled, with the branded drug company paying money (maybe also granting exclusive dealership) and the generic drug maker agreeing not to enter until the patent expires. Such settlements give rise to antitrust concerns, especially when the generic company is the first applicant to enter the market at issue, because under the Hatch-Waxman Act, the first applicant enjoys a 180-day exclusivity period during which no other generic company may enter the market.⁴⁶ The exclusivity period will not start to run unless (1) the first applicant starts marketing or (2) a court rules that the patent is not infringed or is not valid.⁴⁷ Therefore, it will not run if the first applicant enters into a pay-for-delay settlement agreement with the branded drug company until after the patent expires.⁴⁸ In this way, the patent holder has prevented during its patent term not only the entry of the first applicant, but also the entry of every other possible generic competitor. The legislative intent of the Hatch-Waxman Act can be perverted by such a clever little trick.

It is a win-win situation for both the branded and the generic drug companies, but consumers will lose and have to carry the burden. According to the FTC's recent report, the number of pay-for-delay deals has been increasing in the past decade and US consumers and taxpayers are paying \$3.5 billion in higher drug costs each year.⁴⁹ Such a heavy burden cannot be justified by the need to recoup initial R&D investments in the pharmaceutical industry. After a patent expires or a generic competitor enters the market, the branded drug company can still enjoy (to a certain extent) a competitive advantage, larger market share and higher product price than its generic competitors because of the brand, goodwill, and trademarks it has built during the lawful monopoly period. The FTC has been a consistent opponent of these deals and brought many cases to stop them ever since 2001.⁵⁰ Indeed, FTC Chairman Jon Leibowitz, who has announced plans to leave the Commission in the unspecified near future, has made this the iconic project of his chairmanship, through litigation, public speaking, and legislative advocacy.

⁴⁴ H.R. Rep. No. 98-957, Pt. 1, at 14 (June 21, 1984).

⁴⁵ Robin J. Strongin, *Hatch-Waxman, Generics, and Patents: Balancing Prescription Drug Innovation, Competition, and Affordability* 10 (Nat'l Health Pol'y Forum Background Paper, Jun. 21, 2002).

⁴⁶ 21 USC. § 355(j)(2)(A)(vii).

⁴⁷ 21 USC. § 355(j)(2)(B)(iv).

⁴⁸ During the patent term, the first applicant agrees not to launch its drug. Besides, because the infringement suit is settled, there will not be a court ruling. Thus, neither of the two conditions will be met.

⁴⁹ *Pay-for-Delay: When Drug Companies Agree Not to Compete*, FED. TRADE COMM'N, <http://www.ftc.gov/opa/reporter/competition/payfordelay.shtml>.

⁵⁰ *Id.* For a detailed analysis on how courts should evaluate pay-for-delay settlement, see Einer Elhauge & Alex Krueger, *Solving the Patent Settlement Puzzle*, 91 TEX. L. REV. 283 (2012).

A clear split exists among different federal court of appeals with respect to such deals. When pay-for-delay agreements were just emerging, both the D.C. Circuit (2001) and the Sixth Circuit (2003) viewed them as a *per se violation* of antitrust law.⁵¹ However, the FTC's victory seemed to come to an end when a series of cases in the Eleventh, the Second, and the Federal Circuits found for the defendants. The Eleventh Circuit, in its *Valley Drug, Schering-Plough, Andrx v. Elan*, and the most recent *AndroGel (FTC v. Watson)* cases, repeatedly held that pay-for-delay agreements are permissible if they do not exceed the scope of the exclusionary potential of the patent at the time of the settlement.⁵² This is known as the "scope of patent" test.⁵³ The court found neither the rule of reason nor the *per se* test was appropriate, as antitrust scrutiny on pay-for-delay settlements would be contrary to the "general policy of law . . . to favor the settlement of litigation."⁵⁴ The court made very clear in its *AndroGel* decision that evaluation of a pay-for-delay deal "requires an examination of: (1) the scope of the exclusionary potential of the patent; (2) the extent to which the agreements exceed that scope; and (3) the resulting anticompetitive effects."⁵⁵ The only exceptions to this rule are sham litigation and fraud in obtaining the patent, but an allegation that the defendant is not likely to prevail in its infringement suit will not count.⁵⁶ The Second Circuit in 2006 and 2010, and the Federal Circuit in 2008, both followed the scope of patent test.⁵⁷

A possible turning point appeared three months after the Eleventh Circuit's *AndroGel* opinion. In the *K-Dur* case, the Third Circuit rejected the scope of patent test, saying that it rested on an incorrect assumption that the patent in question was valid and infringed.⁵⁸ Instead, the court held that

"the finder of fact must treat any payment from a patent holder to a generic patent challenger who agrees to delay entry into the market as *prima facie evidence* of an unreasonable restraint of trade, which could be rebutted by showing that the payment (1) was for a purpose other than delayed entry or (2) offers some pro-competitive benefit."⁵⁹

⁵¹ *Andrx Pharms, Inc. v. Biovail Corp. Int'l*, 256 F.3d 799 (D.C. Cir. 2001); *In re Cardizem CD Antitrust Litig.*, 332 F.3d 896, 908 (6th Cir. 2003).

⁵² J. Thomas Rosch, Commissioner, Fed. Trade Comm'n, Remarks at CBI's 2nd Annual Life Sciences Compliance, Legal, and Regulatory Congress: Pharmaceutical Patent Settlements and the Supreme Court (Sep. 21, 2012) 3, 4, *available at* <http://www.ftc.gov/speeches/rosch/120921cbipharmaspeech.pdf>.

⁵³ *Id.* at 3.

⁵⁴ *Schering-Plough Corp. v. FTC*, 402 F.3d 1056, 1072 (11th Cir. 2005).

⁵⁵ *FTC v. Watson Pharms., Inc. (AndroGel)*, 677 F.3d 1298, 1310 (11th Cir. 2012) (quoting *Schering-Plough*, 402 F.3d at 1065).

⁵⁶ *Id.* at 1312.

⁵⁷ *Joblove v. Barr Labs., Inc. (In re Tamoxifen Citrate Antitrust Litig.)*, 466 F.3d 187 (2d Cir. 2006); *Arkansas Carpenters Health & Welfare Fund v. Bayer AG (Cipro)*, 604 F.3d 98 (2d Cir. 2010); *In re Ciprofloxacin Hydrochloride Antitrust Litig.*, 544 F.3d 1323, 1336 (Fed. Cir. 2008).

⁵⁸ *In re K-Dur Antitrust Litig.*, 686 F.3d 197, 214 (3d Cir. 2012).

⁵⁹ *Id.* at 218.

The Third Circuit acknowledged the fundamental judicial policy favoring settlements, but it gave more weight to the overriding public interest in “judicial testing and elimination of weak patents” and the Hatch-Waxman Act’s goal of litigated patent challenges.⁶⁰ The Supreme Court has agreed to take up the *AndroGel* case but at this writing had not decided whether to take the *K-Dur* case as well.⁶¹

There are other tactics used by pharmaceutical patent holders to delay generic competition or otherwise to extend the duration of their own patent protection.⁶² The FTC recently filed an amicus brief against the practice of “product hopping” or “product-switching,” which means making modest reformulations that offer little or no therapeutic advantages, but are supposedly sufficient for justifying issuance of a new patent that in effect prolongs the life of the initial patent.⁶³ One example given by the FTC is that a branded drug company can withdraw its original product before any generic competitor’s entry, “forcing consumers to switch to the reformulated brand drug and enabling the branded company to keep its market exclusivity and preventing consumers from obtaining the benefits of generic competition.”⁶⁴ The FTC argued that such redesigns can constitute exclusionary conduct in violation of Section 2 of the Sherman Act.⁶⁵ We do not know if this argument will prevail.⁶⁶

⁶⁰ *Id.* at 215.

⁶¹ Jonathan Stempel, *Supreme Court to Hear “Pay-for-Delay” Drug Case*, REUTERS, Dec. 7, 2012, <http://www.reuters.com/article/2012/12/07/us-usa-court-drugs-payfordelay-idUSBRE8B617T20121207>.

⁶² Monsanto’s patent exhaustion claim is another example of the efforts to extend the duration of patent protection. *See supra* notes 39–42 and accompanying text.

⁶³ Press Release, Fed. Trade Comm’n, FTC Files Amicus Brief Explaining That Pharmaceutical “Product Hopping” Can Be the Basis for an Antitrust Lawsuit (Nov. 27, 2012), *available at* <http://www.ftc.gov/opa/2012/11/doryx.shtm>. Our information is as of January 4, 2013. One of the hurdles faced by patent holders will be the doctrine of double patenting. It may be important to highlight the policy concern behind this doctrine:

The public should . . . be able to act on the assumption that upon the expiration of the patent it will be free to use not only the invention claimed in the patent but also modifications or variants which would have been obvious to those of ordinary skill in the art at the time the invention was made, taking into account the skill in the art and prior art other than the invention claimed in the issued patent.

See 804 Definition of Double Patenting [R-5], U.S. PATENT & TRADEMARK OFFICE, <http://www.uspto.gov/web/offices/pac/mpep/s804.html>.

⁶⁴ *Id.*

⁶⁵ Federal Trade Commission’ Brief as Amicus Curiae, *Mylan Pharmaceuticals, Inc., et al. v. Warner Chilcott Public Limited Company, et al.* (E.D. Pa. 2012), *available at* <http://www.ftc.gov/os/2012/11/121127doryxamicusbrief.pdf>.

⁶⁶ There is little case law in the US on the issue of product switching. One federal district court refused to dismiss an antitrust claim (Section 2 of the Sherman Act) involving product switching, reasoning that “judicial deference to product innovation . . . does not mean that a monopolist’s product design decisions are per se lawful.” *Abbott Labs. v. Teva Pharm. USA Inc.*, 432 F. Supp. 2d 408, 422 (D. Del. 2006). Another court found that product switching through sales persuasion was generally okay (this was also a Section 2 claim). It granted the branded drug manufacturer’s motion to dismiss, holding that “[t]he fact that a new product siphoned off some of the sales from the old product and, in turn, depressed sales of the generic substitutes for the old product, does not create an antitrust cause of action.” *Walgreen Co. v. AstraZeneca Pharms.*, 534 F. Supp. 2d 146, 152 (D.D.C. 2008). *See also* Paul Ragusa & Dennis Bissonnette,

The EU is also facing similar entry-delaying strategies. On December 6, 2012, the EU Court of Justice affirmed a lower court's decision holding that AstraZeneca abused its dominant position by (1) trying to mislead various national patent offices when applying for extensions of the patent protection for its brand drug Losec, and more importantly, (2) withdrawing the original capsule form of Losec and its market authorization in several countries and replacing it with a new tablet form that could be dissolved in water, which made it easier to take for older patients who had trouble swallowing pills.⁶⁷ Although this case may also be seen as having elevated the bar of intellectual property monopoly abuse,⁶⁸ it can still be instructive to the US. Section 5 of the Federal Trade Commission Act, a statute which potentially can be used as the US version of "abuse of dominant position," may be useful to Section 2 of the Sherman Act, in dealing with tactics stifling generic competition in the pharmaceutical industry.

Standard-Setting, SEPs, and F/RAND Commitments

There is generally often only one patent in each branded drug, which cannot be true in information and communications technologies industries. A smartphone or tablet may embrace hundreds or thousands of patents. A technology giant may own thousands of patents.⁶⁹ Some of the patents are essential, while others are not. Some of them are ground-breaking and strong, while others are weak and vague. In a market with many products and many patents, standard-setting is very important, as it enables interoperability among both competing and complementary products and enhances efficiency, competition and consumer welfare.⁷⁰

Standards are ubiquitous in our everyday lives and crucial to the economy, and standard setting organizations (SSOs) are therefore playing an important role. So the question becomes how to police the standard setting process. The controlling precedent was decided thirty years ago but in

Pharmaceutical Product Switching: Antitrust Pitfalls, LAW360 (Jan. 11, 2013),
<http://www.law360.com/articles/403075/pharmaceutical-product-switching-antitrust-pitfalls>.

⁶⁷ Brian Byrne & David Hull, *EU AstraZeneca Ruling — A Letdown for Life Sciences Cos.*, LAW360 (Dec. 21, 2012), <http://www.law360.com/ip/articles/402334/eu-astrazeneca-ruling-a-letdown-for-life-sciences-cos->. The second conduct was anticompetitive because it has raised the entry barrier when the patent protection on the original version expired. Due to the regulations, a generic competitor could no longer rely on AstraZeneca's authorization to obtain its own marketing authorization, nor could it rely on AstraZeneca's data relating to tests and clinical trials on the original capsule. It also "prevented parallel imports of the original version of Losec from low-price member states into those member states that required that a marketing authorization for the imported product be in force." *Id.*

⁶⁸ Melissa Lipman, *EU AstraZeneca Ruling Raises Bar for IP Monopoly Abuse*, LAW360 (Dec. 6, 2012), http://www.law360.com/articles/398295/eu-astrazeneca-ruling-raises-bar-for-ip-monopoly-abuse?related_articles=1.

⁶⁹ As of 2012, IBM dominated the US patent list by owning 6,478 patents. Samsung was No. 2 with more than 5,000 patents. Japanese companies Canon, Sony and Panasonic took the third, fourth and fifth places. Microsoft ranked No. 6 with 2,613 patents. Google ranked No. 21, having 1,151 patents and Apple took the 22nd place with 1,136 patents. Erin Coe, *IBM Continues to Dominate US Patent List*, LAW360 (Jan. 10, 2013), <http://www.law360.com/ip/articles/406396/ibm-continues-to-dominate-us-patent-list>.

⁷⁰ American Antitrust Institute's Brief as Amicus Curiae at 3, *Apple, Inc. v. Motorola, Inc.* (Fed. Cir. 2012), *available at* <http://www.antitrustinstitute.org/~antitrust/sites/default/files/2012.12.04%20AAI%20Amicus%20Brief%20In%20Support%20of%20Neither%20Party.pdf>.

some ways seemed almost forgotten. In *American Society of Mechanical Engineers v. Hydrolevel*,⁷¹ the Supreme Court held that an SSO could not escape antitrust liability under the apparent agency theory if some of its members engaged in certain anticompetitive conduct in violation of antitrust law.⁷² In other words, an SSO should be actively watching and policing what its members are doing under the standard setting veil. The *Hydrolevel* holding was recently revived by a federal court in Pennsylvania. In *TruePosition v. LM Ericsson*, plaintiff TruePosition alleged Qualcomm, Ericsson and Alcatel used their influence within two SSOs, the European Telecommunications Standards Institute (ETSI) and Third Generation Partnership Project (3GPP), to prevent the adoption of its technology into the 4G wireless network standards.⁷³ U.S. District Judge Robert F. Kelly refused to dismiss 3GPP as a co-defendant because 3GPP could have enabled the anticompetitive behavior at issue by failing to prevent abuse of its standardization process.⁷⁴

The case expressed a clear message that an SSO should actively oversee its agents' activities. The court emphasized the fact that "the majority of the allegations specifically involve the actions of the corporate defendants as chairmen of 3GPP's committees thwarting and using its standardization process to disadvantage a competitor."⁷⁵ The decision also stated, "[i]t is because of, and not in spite of, their apparent authority as chairmen of pertinent 3GPP subcommittees that the corporate defendants were supposedly able to abuse 3GPP's standardization process, including its rules and regulations, for their own benefit and were able to supposedly disadvantage a competitor."⁷⁶ An SSO cannot isolate itself from its members when the members are acting under apparent authority. Otherwise, the court reasoned, "it would encourage a SSO to do as little as possible to oversee its agents, resulting in an increasing likelihood that a SSO's reputation would be used for anticompetitive ends."⁷⁷ The AAI has been advocating that SSOs should play a more active role against anticompetitive activities engaged by its members in the standard setting process,⁷⁸ and applauds the ruling made by the court in the *TruePosition* case, which is but one sign of the increasing pressure being brought to bear on SSOs to reform.

⁷¹ *Am. Soc'y of Mech. Eng'rs, Inc. v. Hydrolevel Corp.*, 456 U.S. 556 (1982).

⁷² *Id.* at 577–578A.

⁷³ Ama Sarfo, *Alcatel, Others Can't Duck TruePosition's 4G Collusion Claims*, LAW360 (Oct. 5, 2012), <http://www.law360.com/articles/384551/alcatel-others-can-t-duck-trueposition-s-4g-collusion-claims>.

⁷⁴ *TruePosition, Inc. v. LM Ericsson Tel. Co.*, 2012 WL 33075 (E.D. Pa 2012).

⁷⁵ *Id.* at .

⁷⁶ *Id.* at .

⁷⁷ *Id.* at .

⁷⁸ *See, e.g.*, the International Trade Commission and Patent Disputes, House Committee on the Judiciary, Subcommittee on Intellectual Property, Competition, and the Internet, July 18, 2012. *See also AAI Testifies Before House in Hearing on the International Trade Commission and Patent Disputes*, AM. ANTITRUST INST., <http://www.antitrustinstitute.org/content/aai-testifies-house-hearing-international-trade-commission-and-patent-disputes>.

In testimony to Congress,⁷⁹ the AAI raised two thoughts with respect to SSOs. First, a large part of the negative dynamic in this area relates to the expense and delay of litigation, which gives the patent holder a substantial advantage over the alleged infringer. To the extent that mandatory arbitration of F/RAND disputes could be part of SSO rules, this would help level the playing field in a positive way.⁸⁰

Second, the AAI urged Congress to revisit the Standards Development Organization Advancement Act of 2004 (“SDOAA”), which mandated application of the antitrust “rule of reason” rather than any stricter antitrust rule or scrutiny for SSOs’ “standards development activity,” defined to include “actions relating to [an SSO’s] intellectual property policies.”⁸¹ SDOAA also enables SSOs to avoid the treble damages remedy that would otherwise be automatic in a private antitrust case⁸² and to obtain an award of the costs of suit including reasonable attorneys’ fees if a claim against the SSO was “frivolous, unreasonable, without foundation, or in bad faith.”⁸³ The motivation for this legislation was to provide an incentive for SSOs to experiment with new policies and practices that would increase *ex ante* transparency about intellectual property rights and associated license terms, thereby reducing risks of *ex post* anticompetitive patent hold-up outcomes.⁸⁴

Although two SSOs adopted new policies of that very kind,⁸⁵ few if any other SSOs have even begun to move in any similar direction. It appears as though the SDOAA has failed. It weakened the holding of *Hydrolevel*, leaving only its spirit in place. Indeed, by reducing antitrust exposure, it may well have had the opposite effect. The AAI has urged Congress to either repeal or revise the SDOAA and to express its intent that the antitrust agencies and courts apply strict antitrust principles to the standard-essential patent situation. An SSO’s failure to implement effective *ex ante* safeguards against patent hold-up outcomes from its proceedings should result in that SSO’s antitrust liability for the resulting anticompetitive effects as the original *Hydrolevel* holding tells.⁸⁶

In October 2012, a Justice Department official propounded six proposals for SSOs to consider to strengthen their patent policies and to address the current ambiguities and uncertainties:

- Establish procedures that seek to identify, in advance, proposed technology that involves patents which the patent holder has not agreed to license on F/RAND

⁷⁹ *AAI Testifies Before House in Hearing on the International Trade Commission and Patent Disputes*, *supra* note 77.

⁸⁰ Courts can help by taking into account the marginal significance of patents when awarding damages. Over time this can mitigate the patent holder’s negotiating advantage.

⁸¹ Pub. L. No. 108-237, 118 Stat. 661, 15 USC. §§ 4301–02.

⁸² *Id.* § 4303.

⁸³ *Id.* § 4304–05.

⁸⁴ *See* 150 Cong. Rec. 3657 (June 2, 2004).

⁸⁵ *See* Justice Department’s 2006 letter to VITA counsel [hereinafter the 2006 Letter], <http://www.justice.gov/atr/public/busreview/219380.htm>; and its 2007 letter to IEEE counsel [hereinafter the 2007 Letter], <http://www.justice.gov/atr/public/busreview/222978.htm>.

⁸⁶ Robert A. Skitol, *Concerted Buying Power: Its Potential for Addressing the Patent Holdup Problem in Standard Setting*, 72 ANTITRUST. L. J. 727, 729 (2004).

terms and consciously determine whether that technology should be included in the standard;

- Make it clear that licensing commitments made to the standards body are intended to bind both the current patent holder and subsequent purchasers of the patents and that these commitments extend to all implementers of the standard, whether or not they are a member of the standards body;
- Give licensees the option to license F/RAND-encumbered patents essential to a standard on a cash-only basis and prohibit the mandatory cross-licensing of patents that are not essential to the standard or a related family of standards, while permitting voluntary cross-licensing of all patents;
- Place some limitations on the right of the patent holder who has made a F/RAND licensing commitment who seeks to exclude a willing and able licensee from the market through an injunction;
- Make improvements to lower the transactions cost of determining F/RAND licensing terms. Standards bodies might want to explore setting guidelines for what constitutes a F/RAND rate or devising arbitration requirements to reduce the cost of lack of clarity in F/RAND commitments. VITA's patent policy, for example, creates an arbitration procedure to resolve disputes over members' compliance with the patent policy; and
- Consider ways to increase certainty that patent holders believe that disclosed patents are essential to the standard after it is set. The number of "essential" patents encumbered by F/RAND licensing commitments at certain standards bodies has increased exponentially in recent years.⁸⁷

Further, Howard Shelanski, Director of the FTC Bureau of Economics, stated in a recent interview,

What the DOJ has been arguing for, what I have been arguing for, is for SSOs to do a better job clarifying what the commitments are by participants in the standard not to exclude once the standard is adopted and once the market power has vested in the standard. That is where the SSOs do not do a good enough job and part of why we have ex post hold-up disputes.⁸⁸

⁸⁷ Renata Hesse, Deputy Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Remarks as Prepared for the ITU-T Patent Roundtable: Six "Small" Proposals for SSOs Before Lunch (Oct. 10, 2012), *available at* <http://www.justice.gov/atr/public/speeches/287855.pdf> (citing Joseph F. Wayland, Acting Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Antitrust Policy in the Information Age: Protecting Innovation and Competition, Remarks as Prepared for the Fordham Competition Law Institute (Sept. 21, 2012), <http://www.justice.gov/atr/public/speeches/287215.pdf>).

⁸⁸ Kevin W. Christensen, *Interview with Howard Shelanski, Director, FTC Bureau of Economics*, ANTITRUST SOURCE, Dec. 2012, at 6, *available at* http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/dec12_shelanski_intrvw_12_20f.authchec.kdam.pdf.

These proposals can be illustrated in more detail. The first issue is the obligations of a patent holder who is participating in a standard-setting process. If the patent holder did not disclose that it owns a patent or several patents essential to the standard in the standard setting process, once the standard is set, the patent holder can refuse to license the patent(s) or only license them on unreasonable terms. This situation is a “patent hold-up.” It is unfair and anticompetitive. SSOs may have their own rules, which may or may not have clear and concise requirements on disclosure of SEPs or license terms. But as *Hydrolevel* and *TruePosition* indicate, to manage the risk of being exposed to antitrust liability, an SSO had better have a clear set of rules requiring that participants disclose existing SEPs and promise to license their SEPs on a “Fair, Reasonable, and Non-Discriminatory” or “Reasonable and Non-Discriminatory” basis (F/RAND commitment). Besides, although these rules are not required, they are encouraged. The Justice Department’s two business review letters on SSO rules can be good examples of what satisfying rules can be like.⁸⁹

Both failure to disclose SEPs and failure to include or comply with a F/RAND promise can run contrary to competition policy, and may even give rise to antitrust claims. A knowing failure to disclose SEPs may constitute an antitrust violation. Although the FTC failed to establish its case in *Rambus v. FTC* for technical reasons,⁹⁰ the door is still open. It is likely that a later case will hold that such failure is not only a deceptive act but an exclusionary act intended to acquire monopoly power, a potential violation of Section 5 of the Federal Trade Commission Act, Section 2 of the Sherman Act, or both.⁹¹

Several more issues have been raised regarding the F/RAND commitment. The first question is: should the F/RAND commitment run with the patent and bind a successor owner of the patent? The Justice Department answered this question affirmatively in its February 2012 statement concerning several acquisitions involving large patent portfolios.⁹² The FTC also gave a positive answer in the *N-Data* settlement. In that case, the patent holding company N-Data was aware of the F/RAND commitment at the time of the patent acquisition but refused to honor it.⁹³ However, at that time the commissioners could not agree on whether only Section 5 of the Federal Trade Commission Act was violated or whether there was also a violation of the Sherman Act.⁹⁴ Now the FTC has taken an unequivocal position in both the Bosch-SPX and the Google consent orders (although not tested in court yet), that a new SEP owner’s enforcement activity in a manner inconsistent with its own or a previous owner’s F/RAND commitment may constitute a violation of Section 5 of the Federal Trade Commission Act.⁹⁵ Moreover, as suggested before, when conducting

⁸⁹ See the 2006 Letter, *supra* note 84; the 2007 Letter, *supra* note 84.

⁹⁰ Foer, *supra* note 4, at 9.

⁹¹ *Id.*

⁹² *Statement of the Department of Justice’s Antitrust Division on Its Decision to Close Its Investigations of Google Inc.’s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp. and Research in Motion Ltd.*, OFFICE OF PUB. AFFAIRS, U.S. DEP’T OF JUSTICE, <http://www.justice.gov/opa/pr/2012/February/12-at-210.html> [hereinafter DOJ Rockstar Statement].

⁹³ Foer, *supra* note 4, at 10.

⁹⁴ *Id.*

⁹⁵ In the Matter of Motorola Mobility LLC & Google Inc., Decision and Order, Fed. Trade Comm’n (2013) [hereinafter FTC Google Patent Order], available at <http://www.ftc.gov/os/caselist/1210120/130103googlemotorolado.pdf>; In the

merger reviews, antitrust agencies should pay close attention to a patent portfolio's acquisition that may enable or facilitate this kind of exclusionary conduct, which may be challenged as a violation of the US merger control statute, i.e., Section 7 of the Clayton Act.

Another set of questions arises: what do “fair,” “reasonable,” and “non-discriminatory” mean in the F/RAND context? At the outset, they should not be merely incomplete or vaguely precatory gestures. Recently the Justice Department and PTO jointly issued a policy statement, which showed the efforts made by the two agencies seeking to ensure that “there is greater certainty concerning the meaning of a F/RAND commitment so that incentives to participate in voluntary consensus standards-setting activities continue to be strong.”⁹⁶ The two business review letters from the Justice Department can provide some guidance on what constitute acceptable F/RAND commitments. Although determining whether a promise is F/RAND may be fact-specific, there ought to be some bottom line principles generally applicable to the meanings of the words. With respect to what is meant by a “fair” price for a license, the FTC has made two suggestions with which we agree. First, the determination should rest on *ex ante* incremental value rather than *ex post* total market value. The reasonable royalty rates should not exceed the *ex ante* incremental value of the invention compared to available alternatives, because the infringer would likely have chosen an alternative if the rates were known to be higher.⁹⁷ Second, the royalty base should be the smallest affected component rather than the entire device.⁹⁸ With respect to what constitutes “reasonable” terms, we believe that it is inconsistent with a F/RAND commitment for the SEP licensor to demand a grantback covering licensee patents beyond those that are essential to the same standard implicated by the licensor's patents. It is unreasonable for the SEP owner to demand a higher royalty for the license to its SEPs than it is willing to pay as a royalty for SEPs within the scope of the required grantback. There should be a “cash-only” option available to any licensee in lieu of any grantback demand. Where defensive termination provisions or covenants not to sue are functionally similar to grandback provisions, they too should not be unreasonably broad.

The post-trial briefs in the *Microsoft v. Motorola* case have also shown efforts to clarify the meaning of F/RAND terms.⁹⁹ We would endorse Microsoft's arguments with respect to the F/RAND commitment, which are also consistent with the recommendations made by the FTC mentioned in the previous paragraph. A patent holder under a F/RAND commitment should: refrain from using the hold-up power conferred by SEPs; determine the value of the particular patent as the small and

Matter of Robert Bosch GmbH, Decision and Order, Fed Trade Comm'n (2012) [hereinafter FTC Bosch-SPX Order], available at <http://www.ftc.gov/os/caselist/1210081/121126boschdo.pdf>.

⁹⁶ ANTITRUST DIV., U.S. DEP'T OF JUSTICE & U.S. PATENT & TRADEMARK OFFICE, POLICY STATEMENT ON REMEDIES FOR STANDARD-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS 8 (2013) [hereinafter DOJ & PTO JOINT POLICY STATEMENT], available at <http://www.justice.gov/atr/public/guidelines/290994.pdf>.

⁹⁷ THE EVOLVING MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION, FED. TRADE COMM'N 168 (2011), available at <http://www.ftc.gov/os/2011/03/110307patentreport.pdf> [hereinafter FTC PATENT REPORT].

⁹⁸ *Id.* at 25.

⁹⁹ Post-Trial Brief for Plaintiff Microsoft Corp., *Microsoft Corp. v. Motorola Inc., et al.*, Case 2:10-cv-01823-JLR (W.D. Wash. Dec. 17, 2012) [hereinafter Microsoft Brief]; Post-Trial Brief for Defendants Motorola Inc., et al., *Microsoft Corp. v. Motorola Inc., et al.*, Case 2:10-cv-01823-JLR (W.D. Wash. Dec. 17, 2012).

incremental change attributed to this patent; and license SEPs at “normal competitive cost.”¹⁰⁰ F/RAND valuation requires consideration of alternatives. Basically,

“If a technology is easy to invent around or has a ready supply of close substitutes, it is likely to receive a relatively lower compensation than others.” . . . Even where a patented technology conferred substantial benefit, if there were “multiple alternatives before the standard was settled, its incremental contribution, properly measured, may be close or equal to zero.”¹⁰¹

And patent pools, but not bilateral agreements, provide real-world comparables for F/RAND valuation.¹⁰² We caution against adoption of Motorola’s calculations (F/RAND should be decided by a hypothetical bilateral negotiation), which may result in inclusion of a hold-up royalty, an excessive burden on many technology companies in current and future patent wars, and may harm market competition, consumer welfare, and even innovation.

The final question in this section will be answered in detail in the next section, which is, whether a F/RAND commitment also implies a promise not to seek an injunction against an alleged infringer of the SEP? A short answer is no, as a matter of both good law and good policy.

Injunctions as a Remedy and the International Trade Commission

Intellectual property rights are analogous to traditional property rights. One of the most notable rights is the right to exclude. Like a property owner can stop others from using his or her property, a patent owner also has the right to exclude others from practicing the patent. Consequently, a presumption developed over time that if an infringement is found, an injunction should be issued. The Supreme Court in 2006 corrected this misconception in the *eBay* case. There should be no presumption in a patent infringement case seeking injunctions. Instead, the traditional four-factor test in should be uniformly applied to every injunction case whether or not a patent is involved.¹⁰³ Namely, an injunction can be issued only when the plaintiff can prove (1) that it has suffered an irreparable injury; (2) that remedies available at law are inadequate to compensate for that injury; (3)

¹⁰⁰ Microsoft Brief, *supra* note 98, at 3–7.

¹⁰¹ *Id.* at 7–8.

¹⁰² *Id.* at 8–13. Microsoft’s brief listed several reasons that are easy to understand. The pool is not likely to succeed if pool royalties are not reasonable. Also, if a patent pool has many patents owned by different patent holders (which is often the case), a single patent holder may not be able to ask for a disproportionate royalty because other licensors are unlikely to agree. In addition, contrary to Motorola’s argument that patent pools aim to minimize royalty payment and therefore are not reliable, participants in the standard-setting process have already benefited. The benefits include advance knowledge, faster product development at reduced costs, and increased market size. Thus, pool royalties indicate a potential bonus. In contrast, a bilateral agreement may include hold-up value and may result from unfair discrimination. F/RAND royalties should be the same for every licensee. They should reflect the absolute value of the patents, but not their relative value determined by the specific situations and bargaining power of the two sides.

¹⁰³ *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391–92 (2006). The Court also noted that an injunction should not be automatically denied when a non-practicing entity (NPE) is plaintiff. However, apparently it would generally be much more difficult for an NPE plaintiff to establish the four factors than an operating company.

that considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.¹⁰⁴ Injunctions, as an equitable remedy, should always require a heightened bar of proof to avoid abuse. As a competition policy matter, if monetary punishment is enough to correct a market participant's wrongful conduct, there would be no need to exclude the infringing product, because consumers will be better off if there are more products and more competitors in the market.

In addition, when an SEP owner makes a F/RAND commitment, it has implicitly acknowledged that a reasonable royalty is adequate compensation for a license to use the patent and it will not seek injunctions against infringers. Judge Posner, sitting by designation in the Northern District of Illinois, applied the eBay decision and found that a patent holder would not be entitled to an injunction for infringement of a F/RAND-encumbered SEP.¹⁰⁵

The Justice Department and FTC focused over the year of 2012 on companies that try to exclude rivals' products from the marketplace by enforcing their SEPs. Perhaps the most significant move came in the end of 2012, when the FTC, as a condition to its approval of a patent acquisition, required Robert Bosch GmbH (Bosch) to agree not to sue for injunctive relief over a portfolio of patents it was acquiring as part of its \$1 billion purchase of SPX Service Solutions.¹⁰⁶ Moreover, the FTC declared that Bosch's seeking injunctions would constitute an unfair method of competition in violation of Section 5 of the Federal Trade Commission Act.¹⁰⁷ However, this is only a consent order, obtained because of Bosch's desire to complete the transaction. It remains unclear whether a court would side with the FTC on this issue. On January 3, 2013, the FTC closed its investigation on Google and announced that Google has agreed to license its SEPs on F/RAND terms to its competitors and with some exceptions not to seek injunctions against them.¹⁰⁸

Despite the *eBay* decision, many operating and non-practicing companies are still bringing infringement cases and seeking injunctions. It is necessary to apply a heightened standard of proof and close judicial scrutiny to injunction relief in cases brought by either operating companies or non-practicing entities. The FTC and AAI have both stated this idea in their amicus briefs in the *Apple v. Motorola* appeal before the Federal Circuit.¹⁰⁹ The FTC stated that when evaluating whether to grant injunctive relief, it is important for a court to take the need of avoiding anticompetitive patent hold-

¹⁰⁴ *Id.*

¹⁰⁵ *Apple, Inc. v. Motorola, Inc.*, No. 1:11-cv-08540 (N.D. Ill. 2012).

¹⁰⁶ Press Release, FTC Order Restores Competition in US Market for Equipment Used to Recharge Vehicle Air Conditioning Systems (Nov. 26, 2012), *available at* <http://www.ftc.gov/opa/2012/11/bosch.shtm>.

¹⁰⁷ *Id.*

¹⁰⁸ Efrati & Kendall, *supra* note 34. However, there is arguably a "loophole" in the patent settlement where Google may be able to seek injunctive relief based on SEPs. *See supra* notes 39–40 and accompanying text.

¹⁰⁹ Brief of Amicus Curiae the American Antitrust Institute Supporting Neither Party, *Apple, Inc. v. Motorola, Inc.* (Fed. Cir. 2012), *available at* <http://www.antitrustinstitute.org/~antitrust/sites/default/files/2012.12.04%20AAI%20Amicus%20Brief%20In%20Support%20of%20Neither%20Party.pdf>; Brief of Amicus Curiae Federal Trade Commission Supporting Neither Party, *Apple, Inc. v. Motorola, Inc.* (Fed. Cir. 2012), *available at* <http://www.ftc.gov/os/2012/12/121205apple-motorolaamicusbrief.pdf>.

up into consideration. Patent hold-up “allows a patentee to be rewarded not based on the competitive value of its technology, but based on the infringer’s costs to switch to a non-infringing alternative when an injunction is issued.”¹¹⁰ And the *eBay* case allows courts to take competition policy into account, and as a result, when there is a F/RAND-encumbered SEP involved, the plaintiff will face an insurmountable burden to prove the factors of irreparable harm, balance of harms, and the public interest.

The AAI asserted that the Supreme Court’s *eBay* decision should be construed as a strong presumption against issuance of injunctions with respect to an SEP subject to an *ex ante* F/RAND commitment made to an SSO and such pursuit of injunctive relief can violate Section 2 of the Sherman Act. The federal courts have become more and more cautious in granting injunctions. For example, the Federal Circuit in October 2012 overturned an injunction on Samsung’s Galaxy Nexus, finding that Apple as the plaintiff failed to present evidence that connected consumer demand for the device to the product feature that allegedly infringed Apple’s patent.¹¹¹ A federal judge in Washington, the home state of Microsoft, on November 30, 2012 rejected Motorola’s attempt to enjoin Microsoft’s products despite an injunction issued by a German court in May, saying that Motorola failed to prove irreparable harm with respect to the two SEPs in question.¹¹² In December, a California federal court denied a permanent injunction sought by Apple against Samsung’s Galaxy products.¹¹³ All of this activity in the federal courts weakened the position of injunction-seeking patent holders.

Plaintiffs often engage in forum shopping, and they have increasingly been shopping at the International Trade Commission (ITC), which enforces Section 337 of the Tariff Act¹¹⁴ and is not bound to apply the *eBay* case. Section 337 is an anti-dumping statute authorizing exclusion orders and cease and desist orders equivalent to injunctions against an imported product that participates in an unfair method of import competition.¹¹⁵ Once the ITC finds an infringement, it has to determine the effect of an exclusion or a cease-and-desist order on: (1) public health and welfare; (2) competitive conditions in the United States’ economy; (3) the production of like or directly competitive articles in the United States; and (4) United States’ consumers.¹¹⁶ The Commission will not issue an exclusion order if it “find(s) that issuing an exclusion order would have a greater adverse impact on the public health and welfare ... than would be gained by protecting the patent

¹¹⁰ Brief of Amicus Curiae Federal Trade Commission Supporting Neither Party, *supra* note 105, at 16.

¹¹¹ *Apple Inc. v. Samsung Electronics Co., Ltd.*, Case No. 12-CV-0630, 8 (Fed. Cir., Oct. 11, 2012).

¹¹² Ben James, *Motorola Can't Use SEPs to Ban Microsoft Products*, LAW360 (Dec. 3, 2012), <http://www.law360.com/articles/398231/motorola-can-t-use-seps-to-ban-microsoft-products>.

¹¹³ Carolina Bolado, *Apple Takes Samsung Injunction Bid to Fed. Circ.*, LAW360 (Dec. 20, 2012), <http://www.law360.com/articles/403476/apple-takes-samsung-injunction-bid-to-fed-circ->.

¹¹⁴ *Intellectual Property Infringement and Other Unfair Acts*, U.S. INT’L TRADE COMM’N, http://www.usitc.gov/intellectual_property/.

¹¹⁵ *Id.*

¹¹⁶ 19 USC. § 1337; 19 C.F.R. § 210.50; *In the Matter of Certain Automatic Crankpin Grinders*, Inv. No. 337-TA-60, Comm’n Op. Dec 1979 (“Crankpin Grinders”), at 17.

holder.”¹¹⁷ The AAI believes that public welfare should include competition policy considerations such as free market competition and consumer welfare, which may outweigh the public interest in protection of patent rights.

Section 337 can impose a harsh ban on imported goods. Many products imported into the US from abroad include patented components. If one component infringes a patent, there is a violation of Section 337 and the entire product arguably must be excluded from importation. Additionally, sales from existing inventories already in the country are enjoined. The result, according to a lobby coalition of US and foreign high tech companies and auto manufacturers, is that

The shift in ITC practice has had severe ramifications for companies in the United States, which seek to compete with foreign companies but are being unfairly saddled with the possibility of a cease and desist or an exclusion order from the ITC or making the Hobson’s choice of paying an unreasonable, unwarranted license fee merely to avoid the possibility of a cease and desist or an exclusion order.¹¹⁸

Congress has held hearings, although no bill had been introduced as of January 15, 2013.¹¹⁹ Even the Federal Circuit has put some limitations on remedies that the ITC can grant.¹²⁰ Both the FTC and the Justice Department have urged the ITC to reconsider standards on patent import bans.¹²¹ The FTC in its Google patent settlement stated that seeking exclusion orders before the ITC for a F/RAND-encumbered SEP can constitute violation of Section 5 of the Federal Trade Commission Act.¹²²

¹¹⁷ In the Matter of Certain Inclined-Field Acceleration Tubes and Components Thereof, Inv. No. 337-TA-67, Comm’n Op. Dec 1980 (“Acceleration Tubes”), 22.

¹¹⁸ This statement is from a two-page briefing sheet distributed by the ITC Working Group. *Modernizing the ITC Patent Process to Ensure Consistent and Fair Application of U.S. Patent Law*, U.S. INT’L TRADE COMM’N (July 2012).

¹¹⁹ *AAI Testifies before House in Hearing on the International Trade Commission and Patent Disputes*, *supra* note 77. Oversight of the Impact on Competition of Exclusion Orders to Enforce Standard-Essential Patents, SENATE JUDICIARY COMM. (July 11, 2012).

¹²⁰ See *Kyocera Wireless Corp. v. Int’l Trade Comm’n*, 545 F. 3d 1340 (Fed. Cir. 2008). In general, a limited exclusion order (LEO) prevents entry into the US of infringing components made by defendant(s). The *Kyocera* court held that an LEO could not also prevent entry of any downstream product containing the infringing components, unless the manufacturer of the downstream product is named as a defendant in the complaint.

¹²¹ Melissa Lipman, *DOJ Official Pushes ITC on Standards Patent Import Bans*, LAW360 (Nov. 8, 2012) <http://www.law360.com/articles/393031/doj-official-pushes-itc-on-standards-patent-import-bans>.

¹²² Shortly after the settlement, Microsoft told the ITC that Google should drop its ITC SEP claims against Microsoft’s Xbox. And Google did drop two claims. Ryan Davis, *Google Must Drop ITC Essential-Patent Claims, Microsoft Says*, LAW360 (Jan. 8, 2013), <http://www.law360.com/competition/articles/405555/google-must-drop-itc-essential-patent-claims-microsoft-says>; Stewart Bishop, *Google Drops ITC Essential-Patent Claims Against Microsoft*, LAW360 (Jan. 9, 2013), <http://www.law360.com/ip/articles/405852/google-drops-itc-essential-patent-claims-against-microsoft>.

The ITC, recognizing it is under political pressure, has called for public comments on the feasibility of reforms in its policies, drawing a response from the FTC,¹²³ among others. Recently it called for public comments on the issue of injunctions in multiple patent infringement claims involving Apple and Samsung. In Investigation 337-TA-796, where Apple sued Samsung for injunctive relief, Apple's comment alleged that injunctions would facilitate competition and benefit consumers, and multiple noninfringing alternatives to Samsung's products including products from Apple, Research in Motion, Google and Microsoft would be immediately available.¹²⁴ On the other hand, in its comment, Samsung argued that such an injunction would harm market competition and consumers,¹²⁵

[t]he diversity of markets and price points served by Samsung, as well as the unique features and innovations in Samsung's mobile devices, means that no competitor could truly replace Samsung's affected articles in the event that an exclusion order issues. No competitor can meet demand at each carrier that would suffer lost inventory and sales as a result of the exclusion of Samsung's mobile devices.¹²⁶

Several operating companies, including Intel, Sprint, Hewlett-Packard and Google, stated that import bans would not serve the public interest in Investigation 337-TA-794, where Samsung sued Apple for injunctions for F/RAND-encumbered SEPs.¹²⁷ The first three companies agreed that allowing exclusion orders on SEPs would be contrary to the public interest and undermine the F/RAND system.¹²⁸ Google called the exclusion order an "extraordinary remedy," and pointed out that Apple's patents at issue only cover small aspects of "the feature-packed Android platform" and do not represent major innovations.¹²⁹ Ericsson thought that injunctions should not be allowed if the patent holder fails to offer F/RAND license terms. However, complete elimination of exclusion orders may encourage licensees to reject truly F/RAND offers, a point with which Motorola

¹²³ Third Party United States Federal Trade Commission's Statement on the Public Interest, In the Matter of Certain Gaming and Entertainment Consoles, Related Software, and Components Thereof, U.S. Int'l Trade Comm'n, Inv. No. 337-TA-752 (June 6, 2012). "Simply put, we are concerned that a patentee can make a RAND commitment as part of the standard setting process, and then seek an exclusion order for infringement of the RAND-encumbered SEP as a way of securing royalties that may be inconsistent with that RAND commitment."

¹²⁴ Ben James, *Samsung Says ITC Ban in Apple Fight Would Hurt Consumers*, LAW360 (Dec. 5, 2012), <http://www.law360.com/articles/398936/samsung-says-itc-ban-in-apple-fight-would-hurt-consumers>.

¹²⁵ *Id.*

¹²⁶ Ryan Davis, *Tech Giants Debate ITC Import Bans over Essential Patents*, LAW360 (Dec. 4, 2012), <http://www.law360.com/articles/398863/tech-giants-debate-itc-import-bans-over-essential-patents>. This time, warning of the danger of hold-up, Apple took the position that a company with F/RAND-encumbered patents should not seek an exclusion order. Samsung thought exclusion orders should be available against unwilling licensees. Brendan Coffman, *Samsung v. Apple at the ITC – Summarizing the Public Interest Briefs*, PATENTPROGRESS (Dec. 5 2012), <http://www.patentprogress.org/2012/12/05/samsung-v-apple-at-the-itc-summarizing-the-public-interest-briefs/>.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

agreed.¹³⁰ The reason why Ericsson took a middle ground arguably is that it just sought to ban Samsung's electronics at the ITC. Samsung used to license the allegedly infringed patents but refused to renew the license. It demanded a lower rate and refused to license its own SEPs to Ericsson on F/RAND terms. Ericsson claimed that such a refusal to pay a F/RAND rate would create an unfair competitive advantage for Samsung over other competitors who have licensed Ericsson's patents.¹³¹ In its response, Samsung did not address the infringement issue. Instead, it emphasized that an import ban would be against the public interest.¹³²

In October 2012, Apple disclosed that the Justice Department has been investigating Samsung's use of SEPs.¹³³ In January 2012, the European Commission (EC) opened an investigation into whether Samsung has distorted competition by seeking sales bans in Europe.¹³⁴ In late December 2012, the EC accused Samsung of abusing its market dominance.¹³⁵ Samsung announced on December 18 that it would stop seeking injunctions against Apple. The EC welcomed this development, but the investigation is still ongoing.¹³⁶ Apple then submitted a filing with the ITC, stating that Samsung should be consistent and stop seeking injunctions against Apple in the US as well.¹³⁷

The most recent development is that in January, 2013, the Justice Department and the PTO jointly wrote to the ITC expressing competition and innovation concerns on the issuance of exclusion orders applicable to F/RAND-encumbered SEPs. They told the ITC that "depending on the facts of individual cases, the public interest may preclude the issuance of an exclusion order in cases where the infringer is acting within the scope of the patent holder's F/RAND commitment and is able, and has not refused, to license on F/RAND terms."¹³⁸

¹³⁰ *Id.*

¹³¹ Django Gold, *Ericsson Takes Samsung Wireless Patents Battle to ITC*, LAW360 (Dec. 3, 2012), <http://www.law360.com/articles/398294/ericsson-takes-samsung-wireless-patents-battle-to-itc>

¹³² Django Gold, *Samsung Tells ITC That Import Ban Will Cripple Competition*, LAW360 (Dec. 17, 2012), <http://www.law360.com/articles/402201/samsung-tells-itc-that-import-ban-will-cripple-competition>. Shortly after this response, Samsung also brought a patent infringement claim against Ericsson in the ITC seeking injunctive relief. Interestingly, Apple submitted a comment to the ITC with respect to this patent fight and argued that any exclusion order issued for Samsung's SEPs would be contrary to public interest and affect market competition. Stewart Bishop, *Apple Asks ITC to Reject Samsung Case against Ericsson*, LAW360 (Jan. 14, 2013), http://www.law360.com/articles/406937/apple-asks-itc-to-reject-samsung-case-against-ericsson-related_articles=1.

¹³³ Brent Kendall, *Apple: DOJ Investigating Samsung's Use of Patents*, WALL ST. J., Oct. 24, 2012, <http://online.wsj.com/article/SB10001424052970204076204578076790061641664.html>.

¹³⁴ Simon Johnson, *Samsung Drops Attempt to Ban Apple Sales in Europe*, REUTERS, Dec. 18, 2012, <http://www.reuters.com/article/2012/12/19/us-apple-samsung-idUSBRE8BH06620121219>.

¹³⁵ Melissa Lipman, *DOJ, USPTO Fight Import Bans in Essential-Patent Cases*, LAW360 (Jan. 8, 2013), <http://www.law360.com/competition/articles/405572/doj-uspto-fight-import-bans-in-essential-patent-cases>.

¹³⁶ Melissa Lipman, *Samsung To Nix Essential Patent Sales Ban Bids in EU*, LAW360 (Dec. 18, 2012), <http://www.law360.com/articles/402499/samsung-to-nix-essential-patent-sales-ban-bids-in-eu>.

¹³⁷ Jonathan Randles, *Samsung Should Drop Bid for U.S. Apple Import Ban, ITC Hears*, LAW360 (Jan. 3, 2013), <http://www.law360.com/ip/articles/404404/samsung-should-drop-bid-for-us-apple-import-ban-itc-hears>.

¹³⁸ See DOJ & PTO JOINT POLICY STATEMENT, *supra* note 95, at 9.

It remains unclear whether the ITC will find a way to accommodate competition concerns, for example on “public interest” grounds,¹³⁹ or ultimately legislation will be necessary.

Patent Portfolio Acquisitions and Patent Assertion Entities (PAEs)

As discussed above, companies are now fighting over those patents in global warfare of an unprecedented scale. In this patent war, or “real chaos,”¹⁴⁰ there are not only operating companies like Apple and Samsung, but non-practicing ones as well.

A non-practicing entity (NPE) refers to a patent holder who does not practice its patents.¹⁴¹ For some NPEs, the primary reason for non-practicing is lack of resources or public interest mission. This type of NPE includes universities, research institutes, non-profit organizations, start-ups, and some individual inventors. However, for other NPEs, the reason is that they do not intend to practice patents. Rather, their business model is to purchase and hold patents to use for asserting them in court in order to obtain large license fees from operators who need the patents. These NPEs have been given a more appropriate name, patent assertion entities (PAEs), or (to use a less neutral term) “patent trolls.”¹⁴²

PAEs make money from patent litigation and patent licensing after threats of litigation. In a patent lawsuit, the cost of litigation is very high, usually much higher than the settlement cost. So even if a defendant knows that the case has little merit, it may still have to settle to avoid the higher litigation cost and the inevitable risk of losing. Some PAEs are receiving investment from third-party litigation finances, sued as hedge funds, to finance their lawsuits.¹⁴³ PAE practices waste limited resources, raise operating companies’ cost, distract companies’ innovation and development efforts, and may even drive some small businesses out of business.

A PAE’s acquisition of a large amount of patents will raise more serious competition concern than an operating company’s similar acquisition. Many operating companies acquire patents too, but part

¹³⁹ In theory the ITC can deny an injunction on public interest grounds, however the FTC testified that its research revealed only three cases (each with a peculiar history) in 35 years in which the ITC has denied an exclusion order on public interest grounds. *Prepared Statement of the Federal Trade Commission before the U.S. Senate Committee on the Judiciary Concerning “Oversight of the Impact on Competition of Exclusion Orders to Enforce Standard-Essential Patents,”* FED. TRADE COMM’N (July 11, 2012), n.28.

¹⁴⁰ Judge Posner called the patent battles “a real chaos.” He does not like the word “war,” because in a war, everyone loses. Charles Duhigg, *The Patent, Used as a Sword*, N.Y. TIMES, Oct. 7, 2012, http://www.nytimes.com/2012/10/08/technology/patent-wars-among-tech-giants-can-stifle-competition.html?pagewanted=all&_r=0.

¹⁴¹ The patent law in the US does not require a patent to be practiced, which is different from most other jurisdictions in the world.

¹⁴² See FTC Patent Report, *supra* note 97, at 8.

¹⁴³ Richard Ehrlickman, *Hedging Your Intellectual Property Bets*, INTELLECTUAL PROP. MAGAZINE, May 2012, at 53, available at <http://www.ipofferings.com/drawings/may12/HedgingYourIPBets-IPM-May2012.pdf>.

of their purpose may be defensive. For example, when Apple sues Samsung for patent infringement, Samsung may counterclaim alleging Apple's devices violate some patents in Samsung's patent portfolio. When considering asserting patents offensively, operating companies have to worry about such counterattack. Moreover, each operating company faces reputational constraints. No operating company would like its sales and revenue to shrink because it has a reputation of caring only about excluding rivals even at the expense of innovation or consumers in the market. In contrast, all these concerns do not exist for a PAE. It only asserts patents offensively,¹⁴⁴ with no worries about any counterattack or reputational constraint. "Mutually Assured" has been separated from "Destruction".

There are many different creatures in the PAE world. The simplest form is a pure PAE. It is an independent patent holding company buying patents and asserting them against operating companies. One example would be Intellectual Ventures (IV).¹⁴⁵ IV has registered many shell companies to hold the patents it has acquired and never disclosed its patent portfolio.¹⁴⁶ This secrecy is understandable because IV treats its patents as investments,¹⁴⁷ and no investor would like to disclose its investment portfolio.

On the other hand, this kind of practice creates great difficulty for honest operating companies that want to license the patents because they may not be able to find the patent holder, not to mention the real party in interest. The line between a pure PAE and an operating company may blur when the operating company engages in troll-like activities. One example is WiLan, where the patent holder had developed most, if not all, of its patented technologies, but it has chosen to assert them and stop practicing them.¹⁴⁸ Another example would arguably be Qualcomm.¹⁴⁹ Although it is still engaging in its own R&D, it is very active in patent litigation, generating large amounts of revenues from patent licensing, and it continues to acquire new patents.¹⁵⁰ The most interesting example may be RPX, which called itself a "defensive aggregation entity."¹⁵¹ It builds up a patent portfolio through a series of patent acquisitions to help its clients, often operating companies, reduce the risk of their becoming the target of patent infringement claims.¹⁵²

¹⁴⁴ Some allege that they only assert patents defensively, e.g., RPX. *Patent Litigation Used to Be a Form of Legal Redress. Today, It Is a Business Model.*, RPX, <http://www.rpxcorp.com/>.

¹⁴⁵ *About Us*, INTELLECTUAL VENTURES, <http://www.intellectualventures.com/index.php/about>.

¹⁴⁶ Matthew Rappaport & Lily Li, *How Hidden IP Assets Hurt the Entire Patent Community*, LAW360 (Nov. 28, 2012), <http://www.law360.com/articles/393963/how-hidden-ip-assets-hurt-the-entire-patent-community>.

¹⁴⁷ *About Us*, *supra* note 137.

¹⁴⁸ *Overview*, WILAN, <http://www.wi-lan.com/company/overview/default.aspx>.

¹⁴⁹ *Qualcomm Technology Licensing*, QUALCOMM, <http://www.qualcomm.com/about/businesses/qlt>.

¹⁵⁰ *Id.*

¹⁵¹ RPX, *supra* note 136.

¹⁵² RPX claims it is different. However, in the Kodak patent sale, RPX cooperated with IV, led a complex consortium and successfully acquired more than 1,100 digital imaging patents. Tom Hals, *Kodak in \$525 Million Patent Deal, Eyes Bankruptcy End*, REUTERS, Dec. 19, 2012, <http://www.reuters.com/article/2012/12/19/us-kodak-patent-sale-idUSBRE8BI0R520121219>.

There are hybrid models too. A common strategy is for an operating company to sell a patent portfolio to an existing PAE but to retain some rights. In this way, these patents can be asserted by the PAE without concerns of counterattack and reputation on the operating company's side. For example, Nokia and Microsoft have transferred some of their patents to Mosaid, a well-known patent holding company, to help them manage these intangible assets.¹⁵³ A more complicated creature will be when multiple operating companies create a new PAE and transfer their own patents to it. An example will be MobileMedia. It was created by Nokia, Sony and a licensing group called MPEG-LA and holds their patents.¹⁵⁴ MobileMedia recently achieved a big victory in Delaware, where a federal court found Apple has infringed its patents.¹⁵⁵

Hybrids can become even more complicated when several operating companies create a new PAE and the PAE acquires patents. Rockstar Bidco LP was originally a bidding group created by a few technology giants such as Apple, Microsoft, Sony, Research in Motion, Ericsson, and EMC.¹⁵⁶ It acquired the bankrupt Nortel Network's 6,000 patents for \$4.5 billion in June 2011.¹⁵⁷ The Justice Department approved that transaction with a degree of caution, acknowledging the anticompetitive effects that may be brought by this kind of acquisitions.¹⁵⁸ It obtained assurances from Apple and Microsoft that they would license SEPs within the acquired portfolio under F/RAND terms to anyone who needed them.¹⁵⁹ However, later 4,000 of the patents in the portfolio were transferred to a new entity, Rockstar Consortium Inc., and its CEO claimed that it was separate and the promises made by the individual companies did not apply to the new entity.¹⁶⁰

The most complicated "patent troll" situation so far appears to involve several operating companies plus a few PAEs forming a new PAE, and the new PAE acquiring patents. This new entity emerged in the bankrupt Eastman Kodak's auction of its digital imaging patent portfolio. A consortium submitted the winning bid. It was led by IV and RPX, and consisted of Adobe, Amazon, Apple, Facebook, Fujifilm, Google, Huawei, HTC, Microsoft, Research-In-Motion, Samsung and Shutterfly.¹⁶¹ This collaboration can be more powerful than Rockstar, for it not only has more

¹⁵³ Alastair Sharp, *Mosaid Sees Rescue in Its Nokia-Microsoft Deal*, REUTERS, Sep. 1, 2011, <http://www.reuters.com/article/2011/09/01/us-mosaid-idUSTRE7803O920110901>.

¹⁵⁴ Ryan Davis, *Apple iPhones Flout Patents Tied to Sony, Nokia, Jury Says*, LAW360 (Dec. 13, 2012), <http://www.law360.com/articles/401398/apple-iphones-flout-patents-tied-to-sony-nokia-jury-says>.

¹⁵⁵ *Id.*

¹⁵⁶ Robert McMillan, *How Apple and Microsoft Armed 4,000 Patent Warheads*, WIRED, May 21, 2012, <http://www.wired.com/wiredenterprise/2012/05/rockstar/>. EMC later dropped out.

¹⁵⁷ *Id.*

¹⁵⁸ DOJ Rockstar Statement, *supra* note 91.

¹⁵⁹ McMillan, *supra* note 150; Albert A. Foer, *Letter to Christine A. Varney, Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice*, AM. ANTITRUST INST. (July 6, 2011), *available at* <http://www.antitrustinstitute.org/~antitrust/sites/default/files/Nortel%20letter%20to%20DOJ.7.6.11.pdf>

¹⁶⁰ *Id.*

¹⁶¹ Hals, *supra* note 146.

operating companies, but also includes two PAEs. Rockstar was seen as a strategy used by Google's rivals to outbid Google on patents that might be crucial for Google's Android technology. Now Google has joined the Kodak bidding group, but there were still other technology companies like LG and Nokia left out. So far, Kyocera, Nokia and Nintendo filed their objections against the deal, arguing that the agreement fails to include language protecting their rights as licensees on their affirmative defenses in connection with any legal action taken against any of them and is inconsistent with the conditional sale order approved in July 2012.¹⁶² A New York bankruptcy judge approved the sale on January 11, 2013.¹⁶³

This type of transaction raises serious competition concerns. A large consortium apparently can have significant exclusionary effects on non-member competitors and generate excellent opportunities for members (who may otherwise be head-to-head competitors like Apple and Samsung) to communicate and collude. Also, as the Rockstar case has shown, after the sale, the patents may be transferred to a group member or some new entity created by several group members. It would thus be difficult for an outside company willing to license the patents to determine who the new patent owner and/or real-party-in-interest is. Furthermore, as the Nortel and Kodak cases have shown, there probably will be more ailing former technology giants filing for bankruptcy and it will not be surprising if their competitors will try to obtain their patent portfolios. Therefore, it may be necessary for the agencies to develop a set of policies to deal with this kind of transaction in order to preserve market competition.

PAEs are playing a more and more important role in patent litigation, and it seems to be the time for the antitrust agencies to take action to stop or at least guide this trend. The number of new patent cases initiated by PAEs increased from 569 in 2006 to 2,544 in 2012 (through December 1, 2012). They counted for from 19% of all new patent suits in 2006 to more than 60% in 2012 (through December 1, 2012).¹⁶⁴ "PAE-generated revenue cost defendants and licensees \$29 billion in 2011, a 400% increase from 2005." However, "no more than 25% of this flowed back to innovation."¹⁶⁵ During 2001-2005, the median damage award for NPEs was \$10.9 million, while the median damage award for operating companies was only \$5.6 million.¹⁶⁶ From 2006 to 2011, the median number for NPEs was \$6.9 million, and that for operating companies was \$3.7 million.¹⁶⁷ The difference has remained significant. And company NPEs (PAEs) received much higher awards than universities

¹⁶² Maria Chutchian, *Nokia, Nintendo Object to Kodak Patent Sale Order*, LAW360 (Jan. 8, 2013), <http://www.law360.com/ip/articles/405428/nokia-nintendo-object-to-kodak-patent-sale-order>.

¹⁶³ Maria Chutchian, *Kodak's \$525M Digital Imaging Patent Sale Gets Green Light*, LAW360 (Jan. 11, 2013), <http://www.law360.com/ip/articles/406654/kodak-s-525m-digital-imaging-patent-sale-gets-green-light>.

¹⁶⁴ Robert A. Skitol, *FTC-DOJ Workshop on Patent Assertion Entity Activities: Fresh Thinking on Potential Antitrust Responses to Abusive Patent Troll Enforcement Practices*, DRINKER BIDDLE & REATH LLP (Dec. 14, 2012), <http://www.drinkerbiddle.com/resources/publications/2012/ftc-doj-patents-workshop>.

¹⁶⁵ *Id.* (citing Jon Leibowitz, Chairman, Fed. Trade Comm'n, Patent Assertion Entities Workshop Opening Remarks of FTC Chairman Jon Leibowitz as Prepared for Delivery (December 10, 2012), *available at* <http://www.ftc.gov/speeches/leibowitz/121210paeworkshop.pdf>)

¹⁶⁶ 2012 PATENT LITIGATION STUDY, PRICEWATERHOUSECOOPERS LLP 7 (2012).

¹⁶⁷ *Id.*

and individuals.¹⁶⁸ From 1995 to 2011, although NPEs had an overall lower success rate in patent infringement suits, they enjoyed a higher success rate than operating companies when the cases were sent to jury.¹⁶⁹ The FTC and Justice Department on December 10, 2012 jointly held a workshop on the issue of PAEs.¹⁷⁰ It brought many of the problems to public attention. We hope that this is but a first step in getting a solid grip on PAEs.

PAEs are like a coin with two sides. They bring efficiencies to the patent system, which include: (1) creating a market to facilitate rewards to innovation and increasing liquidity; (2) specializing in patent enforcement and enforcing more patents; and (3) licensing in bundles which may facilitate efficient one-stop shopping. However, substantial resources are wasted during the process and only a small portion of money rewards apparently goes to inventors. The more crucial side of this coin must be the anticompetitive effects that PAEs bring to this activity. As mentioned above, high litigation costs can be a significant burden on operating companies. In addition, because a big patent portfolio can be split into several small portfolios and held by separate entities, there may be a problem of overcompensation. Third, because of lack of transparency, weak and vague patents can hide in huge portfolios and be asserted. Moreover, there can be imperfect contracts so that after acquisition, the original F/RAND licensing commitments in the patents may not be taken along. Finally, there can be many classic antitrust problems, including (1) monopolization over intellectual property to obtain market power and distort market price; (2) raising rivals' cost and/or entry barriers for new innovations by transferring patents to a PAE so that it can bring infringement claims without any concern about counterclaims or reputational effects; and (3) contract, combination or conspiracy in restraint of trade when multiple operating companies agree to transfer patents to a PAE, either an existing one or a new one created by those companies.

To preserve healthy market competition, but not to hurt innovation, reforms in the current patent system and actions by the antitrust agencies are both necessary to address PAE problems. It is tempting to say that the solution is to require all patents to be practiced. However, this extreme remedy may not well serve the goal of patent protection, nor may it serve the public interest. Pursuant to a federal technology transfer statute, certain entities – such as universities and other non-profits – may hold patent rights and not practice them.¹⁷¹ Instead, they are encouraged to license the inventions to the private sector.¹⁷² Pursuant to the successful system, patents are used to reward and facilitate innovation. Based on federally funded research or other instances, inventors may not have sufficient resources to practice the patents at the first hand. They may need to secure patent protection first, and then seek investment from industry or strategic investors. Requiring patents to be practiced would chill basic research and may stifle innovation.

¹⁶⁸ *Id.* at 27.

¹⁶⁹ *Id.* at 12.

¹⁷⁰ *Patent Assertion Entities Workshop*, FED. TRADE COMM'N, <http://www.ftc.gov/opp/workshops/pae/>.

¹⁷¹ 35 U.S.C. § 202(a) (2000).

¹⁷² This statute promotes the utilization of patents and the collaboration between private commercial concerns and non-profit organizations (non-PAE NPEs), and makes sure that the patents are used to facilitate free competition without undue encumbering future research. 35 U.S.C. § 200 (2000).

A patent does not need to be practiced, but whether a patent is practiced should become an important factor in determining damages and issuance of injunctions. As a policy matter, it is often better to compete in the marketplace than in the courtroom, and it is often better to practice than to litigate patents. Courts have expressed suspicion in the remedies available in patent infringement cases. The Supreme Court correctly moved away from a presumption in favor of patent injunctions when it held in the *eBay* case that a court should go through the traditional four-factor equity test in all cases seeking injunctive relief, whether or not patents are involved.¹⁷³

PAEs should meet a heavier burden to obtain either injunctive relief or damages. If a patent is not practiced, it would be more difficult for the plaintiff seeking an injunction to prove irreparable harm or hardship on itself. Similarly, if a patent is not practiced, it would be almost impossible for a plaintiff in a patent infringement case seeking damages to prove any harm to its sales, brand, or goodwill (but a PAE plaintiff may still receive reasonable royalties).

The PAE problem needs to be faced by the courts and enforcement agencies. Courts should police abusive patent practices. For example, there is a huge difference between *ex ante* patent enforcement and *ex post* pursuit of injunctive relief in patent litigation. *Ex post* pursuit of injunctions is much more anticompetitive especially when there is any SEP involved because there will likely be insurmountable switching cost and lock-in effects. Courts should take competition policy into consideration when hearing this kind of case. Also, courts should be aware of the bias inherent in each side's expert testimony in patent litigation. Court-appointed neutral experts plus jury instructions in plain English can help reduce the number of false positives in patent infringement cases.

Antitrust agencies should be particularly skeptical about Rockstar-like consortiums. When such a consortium is formed, special Hart-Scott-Rodino (HSR) filings may not be needed. But the agencies should always be on guard, watching out for expected patent transactions. When the entity acquires patents, depending on the size of transaction, an HSR filing may or may not be necessary.¹⁷⁴ If the PTO's proposed new rule regarding real-party-in-interest (RPI) comes into effect, a filing may be required every time when ownership of a patent changes.¹⁷⁵ This filing will notify the antitrust watchdogs so that they can start to assess the anticompetitive effects of patent transfers even absent an HSR filing. Also, the agencies should pay close attention to transactions where an operating company acquires another with a huge patent portfolio (for example, Google's acquisition of Motorola). When doing HSR review, agencies should keep in mind that these transactions are not ordinary acquisitions. A packet of patents, including SEPs, can have very significant exclusionary effects. The problem will become more serious if the acquirer refuses to respect the original F/RAND commitment in the patents. The agencies must try to minimize all the anticompetitive effects. The FTC's Google decree set a good example. It found that Motorola's breach of commitment and pursuit of injunctive relief would constitute "unfair methods of competition" in violation of Section 5 of the Federal Trade Commission Act.¹⁷⁶ This is a positive move forward from the Justice Department's relatively weak handling of the Google-Motorola acquisition and has made

¹⁷³ *Apple, Inc. v. Motorola, Inc.*, No. 1:11-cv-08540.

¹⁷⁴ See WHAT IS THE PREMERGER NOTIFICATION SYSTEM? AN OVERVIEW, FED. TRADE COMM'N 2-6 (2009).

¹⁷⁵ Notice of Public Roundtable and Request for Comments, 77 Fed. Reg. 70385 (November 26, 2012).

¹⁷⁶ See *supra* note 94 and accompanying text.

the message in the FTC's Bosch-SPX order against seeking injunctions for SEPs much stronger by expanding it beyond the merger review context.

Seeing what Rockstar and its founding members have reportedly done after the Nortel patent acquisition (namely, disclaiming the promises to adhere to the prior F/RAND license commitments), one may conclude that what the Justice Department did when approving the transaction was not enough. Also, the Justice Department did not attempt to deal with the question of whether there was anything improper about Google's principal rivals ganging up in a consortium to outbid Google on patents that may be crucial for Google's Android product line. We hope that the Justice Department will aggressively investigate any coalition of leading competitors that appears to be formed or utilized for the purpose of disadvantaging an excluded rival such as by depriving it of access to an SEP. Later comers to the product standard, like Google in the *Nortel* case, should be beneficiaries of the F/RAND commitments made to the SSO during the standard-setting process. The district court in *Microsoft v. Motorola* has ruled that Microsoft is a third-party beneficiary of Motorola's contractual obligations to the SSOs.¹⁷⁷ The Ninth Circuit in an interlocutory appeal held that this conclusion was not legally erroneous.¹⁷⁸

The Patent and Trademark Office (PTO) should act too. The FTC has been looking at the entire patenting process and making strong recommendations for reform.¹⁷⁹ The Justice Department issued a joint policy statement with the PTO on January 8, 2013 where the PTO clearly recognized the importance of competition policy in current patent issues.¹⁸⁰ To better resolve the PAE issue, patent quality and patent notice problems remain to be addressed. Firstly, the PTO should ensure the quality of patents it issues, especially abstract software patents and business method patents. The examiners in the PTO may need more training, especially on competition policy and the exclusionary effect a patent may impose on the market. Issues such as under what circumstances software inventions and business methods should receive patent protection¹⁸¹ and whether tentative rejections after re-examination process should be used as evidence against finding of infringement¹⁸² should be considered in light of competition policy (Congressional support may be needed, especially if examiners are to be provided more time to conduct more effective examinations). Also, the PTO may need to be cautious in granting design patents, because (1) they can have significant exclusionary effects, (2) they are not functional and thus arguably may not be able to promote useful sciences or arts, and (3) their functions may overlap with trademarks, which may result in overprotection unnecessarily stifling competition.

¹⁷⁷ Order on Plaintiff's Motion for Partial Summary Judgment, *Microsoft Corp. v. Motorola, Inc.*, Case No. C10-1823JLR, at 10 (W.D. Wash., Feb. 27, 2012).

¹⁷⁸ *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 884 (9th Cir. 2012).

¹⁷⁹ See FTC PATENT REPORT, *supra* note 97.

¹⁸⁰ See DOJ & PTO JOINT POLICY STATEMENT, *supra* note 95.

¹⁸¹ Whether to grant business method patents and software patents is one of the most complex and controversial issues in patent law. See Gene Quinn, *Patenting Business Methods and Software in the U.S.*, IPWATCHDOG (July 18, 2011), <http://www.ipwatchdog.com/2011/07/18/patenting-business-methods-and-software-in-the-u-s/id=18209/>.

¹⁸² See Bill Donahue, *Apple Patent Tentatively Rejected by USPTO, Samsung Says*, LAW360 (Dec. 7, 2012), <http://www.law360.com/articles/399865/apple-patent-tentatively-rejected-by-uspto-samsung-says>.

Another flaw that needs to be fixed in the patent system is lack of transparency in patent ownership. There need to be better public notice, better disclosure, and lower search costs. If a potential market participant wants to license any technology, it must be able to find it with reasonable search costs. Market competition can be preserved only when each market entrant is free from worries that a “troll” might be waiting under the bridge to catch it. The PTO held a roundtable on January 11, 2013, where panelists discussed the proposed rulemaking on the issue of real-party-in-interest (RPI) which would require disclosure of RPI at certain checkpoints.¹⁸³ They presented various arguments, including that greater transparency is necessary to (1) help operating companies with their technology licensing and risk management, (2) give notice to and assist regulatory agencies in assessing competitive impact brought by transactions involving patent transfers, (3) enhance efficiency, innovation and market competition, (4) deter opportunistic behavior by PAEs, (5) prevent unnecessarily increased costs from eventually falling onto consumers, and (6) improve the current patent system to better serve the public notice function mandated by the Constitution. Many technology giants, including IBM, Hewlett-Packard and Google apparently support the new rule, which reflects their willingness to focus on innovation and development without being distracted by PAE activities.¹⁸⁴ We welcome the recent moves including this proposed rulemaking by the PTO.

Conclusion: on the Road to Global Cooperation

Competition policy and intellectual property law come together in a number of economically important ways that we have been discussing. We stand in early 2013 at a rather dramatic crossroads in the sense that so much is happening at the same time and there is a generalized realization that we cannot continue to have our economies go down each road—Intellectual Property, Antitrust, and Trade—as if the other does not exist. The above issues are of obvious concern to many trading nations. For example, the role of the ITC as a *de facto* patent court clearly affects Japanese manufacturers like Nintendo and Sony. Germany has developed a reputation as a forum friendly to patent-based injunctions and China has also such a reputation. SSOs like 3GPP develop standards that define the shape and competitiveness of global markets, regardless of where their working groups meet or the language in which they conduct their meetings. Patent hold-up conduct directed against innovative entrants into new markets in Europe or Asia can adversely affect competition within the US as well as in their home countries. Patent acquisitions and formation of PAEs often involve multinational companies. South Korea and South Africa, among other countries, have enacted technology transfer statutes based on the US model. For all these reasons, the competition issues in the patent world demand global solutions. Public and private stakeholders throughout the world need to deepen the relatively new but hugely exciting dialogue about the desirable policies and remedies in this multidisciplinary arena.

¹⁸³ Notice of Public Roundtable and Request for Comments, 77 Fed. Reg. 70385 (Nov. 26, 2012).

¹⁸⁴ *Roundtable on Proposed Requirements for Recordation of Real-Party-in-Interest Information*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/ip/officechiefecon/roundtable_01-11-2013.jsp.