The Federal Trade Commission's Evolving IP Marketplace Report's Challenge to Inventiveness, Innovation, and Competitiveness

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In March 2011, the U.S. Federal Trade Commission issued its report, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* (*IP Report*).[1] The *IP Report* includes a number of observations and proposals that are directed not to antitrust law, but rather to proposed modifications of U.S. patent law. In particular, the *IP Report* proposes reforms of existing patent notice rules and patent infringement remedies. It argues that such reforms are necessary because technology patent holders presently are exacting unacceptable rewards by enforcing their patented technologies and thereby "holding up" technology implementers and impeding technological innovation.

A previous issue of *The Antitrust Source* included two articles (one by a member of the Commission and her attorney advisor, and the other by an attorney advisor to another Commissioner) expressing views supportive of the *IP Report*'s analyses and proposals.[2] This article, in contrast, takes the view that the *IP Report*'s analyses and proposals are premised on flawed assumptions concerning the definition and nature of "hold-up" and the actual existence of conditions that, according to the report, support the need for reforms. As a result, as discussed here, the *IP Report* does not appear to address any actual marketplace failures, anticompetitive distortions, or limitations on innovation, but instead proposes reforms that would reorder existing legal and economic principles and impose a wealth transfer from patent owners to downstream patent users, which could deter innovation—an effect directly contrary to the report's stated purpose.

The *IP Report*'s focus can be discerned from its definition of hold-up, which is based on certain underlying assumptions that are at a minimum questionable. It also reflects a definition of hold-up that is inconsistent with the common understanding of that term as used in legal and economic contexts, or as understood in the technology standard-setting community. Flowing from its flawed definition of hold-up, and contrary to the suggestion of at least one observer that the proposals in the report are procedural and largely modest,[3] the *IP Report* in fact calls for a radical transformation of the policies underlying patent law. The report's proposals would upend the incentive scheme of existing patent law that the U.S. Constitution, Congress, and the judiciary

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1 FED. TRADE COMM'N, THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION (2011) [hereinafter *IP Report*], *available at* http://www.ftc.gov/os/2011/03/110307patentreport.pdf.

2 Edith Ramirez & Lisa Kimmel, *A Competition Policy Perspective on Patent Law: The Federal Trade Commission's Report on the Evolving IP Marketplace*, ANTITRUST SOURCE, Aug. 2011, http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/aug11_ramirez_7_26f.authcheckdam.pdf; Henry C. Su, *Invention Is Not Innovation and Intellectual Property Is Not Just Like Any Other Form of Property: Competition Themes from the FTC's March 2011 Patent Report*, ANTITRUST SOURCE, Aug. 2011, http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/aug11_su_7_26f.authcheckdam.pdf.

3 Su, *supra* note 2, at 12.

have devised to encourage investment in new inventions and the dissemination of such inventions through technology transfers (i.e., licensing). The result would be to refocus patent law to advance the interests of patent users, but at the expense of well-established and longstanding rights of patent owners. Any doubt that such an approach would represent a sea change is resolved by the fact that Congress recently rejected many of the *IP Report*'s proposals in its consideration of patent reform and its adoption of the America Invents Act.[4]

In addition, there is a significant question whether the proposed reforms of the *IP Report* are at all practical in light of actual marketplace realities involving patent enforcement and licensing, and the actual state of innovation and competitiveness, particularly in the technology sector. The problem as defined by the report is that patent holders are able to extract from users of patented technology (e.g., manufacturers) greater value than should be attributed to the patented invention, and that incentives of patent users to engage in commercial endeavors are impeded because of the excessive costs that may be imposed upon them.[5] Accordingly, the *IP Report* says, patent owners should be permitted to realize only the "incremental value" of their inventions as determined by a formula that has been neither tested nor shown to be appropriate theoretically or practicably.

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The incremental value approach proposed by the *IP Report*, besides raising numerous practical problems, itself risks inhibiting innovation by patent owners and even patent users, and causing increased costs to consumers. More specifically, the incremental value test would limit the value of a patented invention to the difference between its value and the value of a next-best alternative (both values to be determined by some yet-to-be accepted method), determined prior to the time that a patent user (i.e., infringer) makes any investment in implementation of the patented technology, but after inventors and investors have sunk their own resources into developing and commercializing the patent technology. As a result, and as explained below, this test would limit the return that patent owners realize on their investments, and conversely increase incentives for infringing conduct and expensive litigation.

Another byproduct of the *IP Report*'s view that patent rights and remedies should be limited is the suggestion that the well-recognized complementary balance between patent law and antitrust law, as established by Congress and enforced in the courts, should be adjusted. The report gives greater weight to the antitrust law's focus on advancing short-term static efficiencies at the expense of allowing consumers to benefit from the dynamic rewards of reinvestment in technology advancements promoted by a strong patent enforcement environment. This, too, reflects a radical departure from settled law, which recognizes the consumer welfare benefits of dynamic, long-term efficiencies that are fostered by the ability of patent owners to realize returns on their investments in developing patented invention so that further investment in follow-on innovation can be supported.[6] Furthermore, settled law also has long recognized that the complementary balance between antitrust law and patent law is based on the fact that each advances competitiveness through its distinct approach: antitrust law's focus on static effects, and patent law's focus on dynamic efficiencies and the encouragement of long term investment in innovation-enhancing endeavors.[7]

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4 America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (Sept. 16, 2011), *available at* http://www.gpo.gov/fdsys/pkg/PLAW-112publ29/pdf/PLAW-112publ29.pdf.

5 *See IP Report*, *supra* note 1, at 5 ("Patent hold-up can overcompensate patentees").

6 *See infra* notes 41–42 and accompanying text.

7 *See, e.g.*, Simpson v. Union Oil Co., 377 U.S. 13, 24 (1964).

Even more problematic, however, is the absence in the *IP Report*, and in the supporting commentary, of any empirical support (either quantitative or anecdotal) that the problems assumed by the report actually exist. While reform of existing laws may be appropriate if circumstances warrant, the report offers no evidence to support its core premises that hold-up is a problem, that excessive exercise of patent rights has harmed innovation, or that the savings from reduced license fees or infringement damages would be passed on to consumers. There is likewise no empirical or other analysis of the impact of the proposed incremental value test on incentives to invest in invention and innovation. The FTC's own Patent Standards Workshop held on June 21, 2011, and the comments received in connection with the workshop,[8] confirm that if anything, existing evidence indicates robust and effective utilization of patented technology to advance innovation and competitiveness, all to the benefit of consumer welfare.

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The *IP Report*'s Definition of Hold-Up

Many of the issues raised by the IP Report can be traced to its definition of hold-up. As stated in the IP Report, hold-up occurs as follows:

> Ex post licensing to manufacturers that sell products developed or obtained independently of the patentee can distort competition in technology markets and deter innovation. The failure of the patentee and manufacturer to license ex ante with technology transfer results in duplicated R&D effort. When a manufacturer chooses technology for a product design without knowledge of a later asserted patent, it makes that choice without important cost information, which deprives consumers of the benefits of competition in the technology market. If the manufacturer has sunk costs into using the technology the patentee can use that investment as negotiating leverage for a higher royalty than the patented technology could have commanded ex ante, when competing with alternatives. The increased uncertainty and higher costs associated with ex post licensing can deter innovation by manufacturers.[9]

Putting aside for the moment whether this is an accurate definition of hold-up (and as discussed below there is disagreement on this point), an examination of the assumptions underlying it suggests that those assumptions may not be well founded.

For example, this definition assumes that at the time a patent holder asserts its patent rights, manufacturers will have undertaken duplicative R&D efforts to develop independent (albeit infringing) technologies. It is more likely (or at least equally likely), however, that the manufacturers merely copied the patent holder's technology, whether willfully or through ignorance, thereby free riding off the investments made by the patent holder in developing the infringed technology, as well as the investments by other (authorized) patent users who used the patented technology to create, along with the patent holder, the market for the patented technology.

A second questionable assumption of the *IP Report*'s definition of hold-up is that infringing firms will be acting without knowledge of potential patent rights. Of course information regarding patent rights is not perfect, but there is little to suggest that sophisticated firms competing in tech-

8 *See* Fed Trade Comm'n, Request for Comments and Announcement of Workshop on Standard-Setting Issues, 76 Fed. Reg. 28,036 (May 13, 2011), *available at* http://www.gpo.gov/fdsys/pkg/FR-2011-05-13/pdf/2011-11704.pdf. All comments submitted in connection with the Workshop can be found at http://www.ftc.gov/os/comments/patentstandardsworkshop/.

9 *IP Report*, *supra* note 1, at 8. *See also* Ramirez & Kimmel, *supra* note 2, at 4 ("Patent hold-up is a specific example of opportunism in the face of sunk costs."). In connection with the FTC's Patent Standards Workshop, held on June 21, 2011, the FTC defined "hold up" as "a demand for higher royalties or other more costly licensing terms after the standard is implemented than could have been obtained before the standard was chosen." Fed Trade Comm'n, Request for Comments and Announcement of Workshop on Standard-Setting Issues, 76 Fed. Reg. 28,036, 28,036 (May 13, 2011), *available at* http://www.gpo.gov/fdsys/pkg/FR-2011-05-13/pdf/2011-11704.pdf.

nology industries cannot and do not avail themselves of the extensive information available to them regarding significant patent holders in such industries. To the contrary, experience suggests that patent-using firms systematically and aggressively undertake patent clearance efforts, especially in technology industries where the existence of extensive patent rights, and the holders of such rights, are widely known. Such efforts are common, and indeed good practice, and the costs of such clearance efforts are well spent; potentially relevant patents can be identified; potential infringing conduct can be avoided; and investment can be efficiently directed to non-infringing efforts that may be complementary to or improvements on existing technology, as well as to new competitive technologies. Firms might also be able to identify advantageous licensing opportunities from their clearance efforts and thus pursue authority to use a patent owner's technology to advance their downstream competitive opportunities. In all events, the efforts would not be duplicative of an existing patent holder's efforts, and would be competition-enhancing.

Another questionable aspect of the *IP Report*'s definition of hold-up is the implication that a patent holder should be required affirmatively to seek out potential users of the patented technology and to give notice of infringing use before such infringing use occurs. This implication arises from the definition's concept that hold-up occurs merely because a patent holder enforces its patent against a patent user that invested in the patented technology without knowledge of the patent. Imposing on the patent holder the burden of forewarning potential infringers or otherwise risk a diminished recovery would be wholly impracticable: how can a patent holder determine the intended strategies of potential infringers? It would also be directly contrary to the fundamental core of patent law, which is that a patent holder has no duty to make a patented invention available whatsoever, and may use its invention entirely to the exclusion of third parties.[10] As discussed further below, defining hold-up in this way may also encourage infringement (include knowing and willful infringement) and result in competitive distortions by undermining incentives to innovate.

The *IP Report*'s definition of hold-up has been questioned by comments made in connection with the FTC's June 2011 Patent Standards Workshop. A number of commenters expressly took issue with the FTC's premise that hold-up would occur simply if a patent user infringes and makes some investment toward its infringing activities before it is charged with infringement. For example, Microsoft and the Telecommunications Industry Association, a leading standard-setting organization, both questioned this concept of "naked" hold-up by commenting that hold-up must include some "intentional and deceptive conduct," and that "routine bilateral disagreements over licensing terms" are not hold-up.[11]

Similarly, Professors Epstein, Kieff, and Spulber took issue with the *IP Report*'s definition of hold-up by commenting that "[t]he term 'hold-up' has a very precise definition in the economic literature," as explained by Oliver Williamson, who referred to it as "opportunism," and defined it as "self-interest seeking with guile."[12] Epstein et al. also comment that Joseph Farrell, Director of the

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10 *See* 35 U.S.C. § 154(a)(1) (patent owners have the "right to exclude others from making, using, offering for sale, or selling the [patented] invention"). Notably, the Patent Act also already limits damages recoverable by a patent owner that does not mark its products. 35 U.S.C. § 287. The *IP Report* would further limit the patent owner's damages under the proposed "incremental value" test.

11 Comments of Microsoft Corp. 7 (June 13, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00009-60523.pdf; Comments of Telecommunications Industry Association 5 (June 14, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00016-60530.pdf. *See also* Comments of Davis Wright Tremaine LLP 5 (June 14, 2011) (proper definition of patent hold up "should require either actual harm or at least 'a dangerous probability' of harm to competition or consumers"), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00014-60528.pdf.

12 Comments of Richard A. Epstein et al. 18 (Aug. 5, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00041-80171.pdf.

FTC's Bureau of Economics, previously in a co-authored paper defined hold-up differently than the way it is used in the *IP Report*, by explaining that, "in very broad terms, opportunism or hold-up arises when a gap between economic commitments and subsequent commercial negotiations enables one party to capture part of the fruits of another's investment, broadly construed." Thus, Farrell et al. went on to say, "Hold-up can arise, in particular, when one party makes investments specific to a relationship before all the terms and conditions of the relationship are agreed."[13] Under that definition, the phrase "hold-up" would not encompass a patent owner's challenge to infringing activities where some investment had been made by the infringer before the assertion of the patent, but rather would describe conduct by patent users who seek to free ride on the significant investment made by patent holders in the development or commercialization of patented technologies.

The Consequences of the *IP Report*'s Definition of Hold-Up

From the *IP Report*'s questionable definition of hold-up follows the radical legal and policy transformation proposed by the report. Rather than encouraging the legitimate use of patented technology, the *IP Report*'s approach would have the effect of encouraging infringing conduct. If an infringing patent user can limit its financial exposure by investing in infringing activities before a patent owner learns of such activities, the patent user will more likely do that than invest in clearance analyses and licensing negotiations. This misdirected incentive will only be exacerbated by the suggestion of the *IP Report* that injunctive relief should be precluded where there is hold-up as defined by the *IP Report*. Besides being contrary to the Supreme Court's rejection of such a categorical rule in *eBay*,[14] diminishing patent owner's rights will elevate infringement risks and concomitantly lessen the potential for procompetitive innovation, as the Federal Circuit explained in *Fromson v. Western Litho Plate & Supply Co.*:[15]

> [I]nfringers could perceive nothing to fear but the possibility of a compulsory license at a reasonable royalty, resulting in some quarters in a lowered respect for the rights of such patentees and a failure to recognize the innovation-encouraging social purpose of the patent system.
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> Thus a cold, "bottom line" logic would dictate to some a total disregard of [such a patentee's] patent because: (1) ill-financed, he probably would not sue; (2) cost of counsel's opinion could await suit; (3) the patent may well be held invalid on one of many possible bases; (4) infringement may not be proven; (5) if the case be lost [by the infringer], a license can be compelled, probably at the same royalty that would have been paid if the patentee's rights had been respected at the outset.[16]

These same observations apply *a fortiori* when the infringer's worst-case scenario is not the payment of a "reasonable" royalty, but a royalty capped by the *IP Report*'s proposed incremental value test, which, as discussed below, would deny a patent owner the recovery of the full value of its invention. Patent users would not be concerned with the risk of having to pay such a royalty many years after commencing their infringing conduct; they would face only the prospect of

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13 *Id.* at 18–19 (quoting Joseph Farrell et al., *Standard Setting, Patents, and Hold-Up*, 74 ANTITRUST L.J. 603, 604 (2007)).

14 eBay, Inc. v. MercExchange, LLC, 547 U.S. 388 (2006).

15 853 F.2d 1568 (Fed. Cir. 1988), *overruled on other grounds by* Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp., 383 F.3d 1337, 1343–44 (Fed. Cir. 2004).

16 *Id.* at 1574. *See also* Smith Int'l, Inc. v. Hughes Tool Co., 718 F.2d 1573, 1578 (Fed. Cir. 1983) ("[W]ithout the right to obtain an injunction, the right to exclude granted to the patentee would have only a fraction of the value it was intended to have, and would no longer be as great an incentive to engage in the toils of scientific and technological research.").

damages limited by the incremental value of the infringed patent,[17] even if the infringement had been knowing and willful or the infringer had refused a license on terms acceptable to others.

Under the proposed incremental value test the infringer would be subject only to damages equal to the difference between the value of the patented technology and the value of the next best alternative technology, as determined before (ex ante) the infringer invested in its infringing activities, but after the patent holder had made its investment in the patented technology. Such an approach would woefully undercompensate patent holders, dissuade litigation-tolerant infringers from seeking licenses, and diminish any incentives to invest in inventive activities.

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In simplest terms, under the *IP Report*'s concepts of hold-up and incremental value, if patents A and B cover alternative technologies and are valued at $12 and $10 respectively prior to the time an infringer makes any investment in its infringing activities and regardless of such activities, the owner of patent A would hold up the infringing patent user if it sought to recover more than $2 in a royalty. This reflects the clearest illustration of the legal transformation that would result if the *IP Report*'s proposals were adopted, and also cannot be squared with commercial realities or the necessary incentives to advance innovation on a number of levels.

First, the FTC's approach to hold-up and its incremental value test would reject established law, as well as the FTC's own prior guidance. For example, as explained by the Supreme Court in *Kewanee Oil v. Bicron Corp.*,[18] the patent laws offer "a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research and development. The productive effort thereby fostered will have a positive effect on society through the introduction of new products and processes of manufacture into the economy . . . ."[19] The Federal Circuit has spoken similarly in *Patlex Corp. v. Mossinghoff*.[20]

Even the FTC has recognized the innovation-facilitating nature of invention based on the strong enforcement of patent holder rights. The 2007 report of the DOJ and FTC on antitrust enforcement and intellectual property[21] explains:

> Intellectual property laws create exclusive rights that provide incentives for innovation by "establishing enforceable property rights for the creators of new and useful products, more efficient processes, and the original works of expression." These property rights promote innovation by allowing intellectual property owners to prevent others from appropriating much of the value derived from their inventions or original expressions. These rights also can facilitate the commercialization of these inventions or expressions and encourage public disclosure, thereby enabling others to learn from the protected property.[22]

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[17] *See also* Ramirez & Kimmel, *supra* note 2, at 7–9.

[18] 416 U.S. 470 (1974).

[19] *Id.* at 480.

[20] 758 F.2d 594, 600 (Fed. Cir. 1985) ("The encouragement of investment-based risk is the fundamental purpose of the patent grant, and is based directly on the right to exclude. As the Supreme Court observed in *Kaiser Aetna v. United States*, [444 U.S. 164, 176 (1979)], the 'right to exclude others' is 'one of the most essential sticks in the bundle of rights that are commonly characterized as property. And as [the] court stated in *Smith International, Inc. v. Hughes Tool Co.*, [718 F.2d 1573, 1577–78 (Fed. Cir. 1983)], without the right to exclude 'the express purpose of the Constitution and Congress, to promote the progress of the useful arts, would be seriously undermined. *This right is implemented by the licensing and exploitation of patents.*") (emphasis added).

[21] U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition (2007) [hereinafter *2007 IP Report*], *available at* http://www.usdoj.gov/atr/public/hearings/ip/222655.pdf.

[22] *Id.* at 1 (quoting U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Guidelines for the Licensing of Intellectual Property § 1 (1995), *available at* http://www.usdoj.gov/atr/public/guidelines/0558.pdf).

Stated simply, the patent law's protections of patent holders' rights are directed to the encouragement of inventive activities, leading to the follow-on innovation that comes about by the commercialization of inventions by patent holders themselves and by third parties who learn of the patented invention through the publication of the patent and who can then engage in their own inventive and innovation-enhancing activities, or through licensing. Thus, while the *IP Report* comments that "[c]ondemning efficient, legitimate uses of patent rights can undermine those incentives [to innovate] and harm consumers,"[23] its primary focus (on hold-up) would do exactly that.

The *IP Report*'s restatement of established understandings of innovation is also reflected by what one commentator has argued is the report's proper elevation of innovation (as conceived in the report) over invention, with invention being given less significance as *merely* the first step in innovation, which in turn only occurs at the commercialization stage.[24] But this dichotomy is flawed. Most notably, it ignores, as explained in the *2007 IP Report* (above), that invention is a *necessary* first step in the innovation process. It is correct that for a number of reasons not all patentable inventions will result in commercialized new products,[25] but absent invention the type of innovation upon which the *IP Report* focuses (i.e., innovation based on patented technology) would not result in the first instance.

Second, specifically with respect to the incremental value test, awarding a patent holder only the $2 *incremental* value of its invention would expropriate from it the *full* value of its invention—rendering pointless the investment of capital in risky research and development. No business, including those in competitive markets, could survive for very long or attract capital if its prices were limited to "incremental" value as defined in the report. Indeed, the FTC has elsewhere recognized that prudent businesses *must* set prices to recover their sunk investment.[26] For example, General Motors is not and should not be required to limit the price of its mid-size sedan to the increment, if any, by which the value of the GM sedan exceeds the value of Ford's mid-size sedan.

Third, the *IP Report*'s approach entirely ignores the risks necessarily borne by those engaging in innovation-enhancing efforts, including the risk of technical or commercial failure and the risk of failing to detect or obtain compensation from infringers. Investing in technology invention is inherently risky, and there may be as many failures as there are successes. But that is exactly the type of competitive "race to invent" that the patent laws encourage.[27] And the loser of a particular lap in a race should continue to be encouraged to finish the race strong by investing further in inventions that might put it over the finish line first or that will allow it to win the race for the next generation of technology. This is why it is settled that market-based compensation for a violation of a patent holder's rights in successful projects is necessary to maintain properly directed incen-

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23 *IP Report*, *supra* note 1, at 1.

24 Su, *supra* note 2, at 2.

25 These reasons may include the absence of sufficient capital or access to commercialization opportunities for the patent owner, especially if the patent owner is a small company or individual. Such patent owners may also lack the wherewithal to protect their patented inventions from infringement by larger firms that may undertake infringing activities knowing that assertion of the patent is not certain, and if litigation does ensue, that they can outspend the patent owner.

26 *See* Administrative Complaint at 21, Intel Corp., FTC Dkt. No. 9341 (Dec. 16, 2009) (alleging that firms with market power must price products and services "well above" average variable cost plus a multiple thereof sufficient to cover contribution to sunk costs), *available at* http://www.ftc.gov/os/adjpro/d9341/091216intelcmpt.pdf. Incremental value takes no account of variable or fixed costs of inventors or investors.

27 *See* Potts v. Coe, 145 F.2d 27, 31 (D.C. Cir. 1944) ("The patent law is designed to encourage competition among inventors by giving a patent to the ingenious [party] who wins in a race for discovery.").

tives for continued investment, and properly takes into account failed projects as well.[28] The *IP Report*'s approach would not.[29]

It is thus unsurprising that the *IP Report*'s approach of relying solely on an incremental value test to cap royalties has been rejected by the courts.[30] It is also inconsistent with and would limit the long-established *Georgia-Pacific* approach to determining reasonable royalty damages based on market factors existing at the time that infringement occurs.[31]

Equally notable is Congress's rejection of reforms of patent remedies analogous to the *IP Report*'s incremental value test when it passed the America Invents Act. Early versions of proposed patent reform bills would have limited reasonable royalty damages to that portion of the "economic value" of the infringing product or process attributable to the patented invention's "specific contribution over the prior art."[32] This test, which is materially indistinguishable from the *IP Report*'s incremental value test, was viewed by many as an effort by certain companies (primarily large users of patented technologies) to lessen their potential infringement liability by eliminating consideration of the broad range of market factors that influence a negotiated or litigated royalty.[33] By 2009, the Senate Judiciary Committee had abandoned proposed changes to the law on patent damages, concluding that the federal courts could exercise a "gatekeeping" role over the factors and methodologies for determining damages.[34] Senator Jon Kyl's observations in this regard are noteworthy. In debating the patent reform proposals, he commented that prior to the Federal Circuit's recent decisions, "I [had] underestimated the courts' ability and willingness to address these problems on their own. And I certainly did not anticipate the speed with which they might do so. . . . The pres-

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28 Of note, Paragraph 8 of the European Commission's Guidelines on the Application of Article 81 of the EC Treaty [now article 101 TFEU] to Technology Transfer Agreements expressly recognizes this concept, commenting "the innovator should normally be free to seek compensation for successful projects that is sufficient to maintain investment incentives, taking failed projects into account." Commission Notice, Guidelines on the Application of Article 81 of the EC Treaty to Technology Transfer Agreements, 2004 O.J. (C 101) 2, 3, ¶ 8, *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2004:101:0002:0042:EN:PDF.

29 *Cf.* Executive Office of the President, National Science & Technology Council, A Policy Framework for the 21st Century Grid: Enabling Our Secure Energy Future 28 (2011) ("the ability to monetize innovation via patents is often critical to driving companies and entrepreneurs to develop and commercialize new technologies, and a balanced and effective intellectual property system must provide appropriate incentives to innovate and protect intellectual property from theft and abuse"), *available at* http://www.whitehouse.gov/sites/default/files/microsites/ostp/nstc-smart-grid-june2011.pdf.

30 *See* Mars, Inc. v. Coin Acceptors, Inc., 527 F.3d 1359, 1373 (Fed. Cir. 2008) (stating that it is "wrong as a matter of law to claim that reasonable royalty damages are capped at the cost of implementing the cheapest available, acceptable, noninfringing alternative. . . . To the contrary, an infringer may be liable for damages, including reasonable royalty damages, that exceed the amount that the infringer could have paid to avoid infringement."); *see also* Panduit Corp. v. Stahlin Bros. Fibre Works, 575 F.2d 1152, 1158 (6th Cir. 1978) ("The setting of a reasonable royalty after infringement cannot be treated . . . as the equivalent of ordinary royalty negotiations among truly 'willing' patent owners and licensees. That view would constitute a pretense that the infringement never happened. It would also make an election to infringe a handy means for competitors to impose a 'compulsory license' policy upon every patent owner.").

31 Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970) (setting out 15-factor test). *Cf.* Ramirez & Kimmel, *supra* note 2, at 8–9 (asserting that courts follow "an overly expansive" application of *Georgia-Pacific*, and that courts should adopt the *IP Report*'s framework for royalty calculations by relying upon a hypothetical ex ante negotiation between the parties, with consideration of the other *Georgia-Pacific* factors as "nonexclusive categories of evidence that may be relevant to predicting the outcome of that negotiation").

32 *See, e.g.*, H.R. 1908, 110th Cong. § 5(a) (2007); S. 1145, 110th Cong. § 4(a), at 73 (as reported by S. Comm. on the Judiciary, Jan. 24, 2008).

33 *See, e.g.*, The Coalition for 21st Century Patent Reform, Codifying Apportionment of Patent Damages, Patentsmatter.com (Apr. 25, 2007), *available at* http://www.patentsmatter.com/issue/pdfs/Codifying%20Apportionment%20of%20Damages-1.pdf; Comments of the Biotechnology Industry Organization before the United States Senate Committee on the Judiciary (Mar. 10, 2009), *available at* http://www.bio.org/advocacy/letters/bio-encourages-senate-judiciary-committee-improve-patent-reform-legislation.

34 *See* S. 515, 111th Cong. (striking apportionment language, as reported by S. Comm. on the Judiciary, Apr. 2, 2009).

ent bill appropriately leaves patent-damages law to common law development in the courts."[35] The decisions to which Senator Kyl referred are a series of decisions between 2009 and 2011 where the Federal Circuit vacated damage awards based on speculative or otherwise unreliable evidence or metrics.[36] The American Invents Act ultimately passed by Congress included no amendment to existing patent damages law as now proposed by the *IP Report*.

Fourth, measuring incremental value as proposed by the *IP Report*, at the time before an infringer expends costs in furtherance of its infringing conduct, is not in fact ex ante at all. By that time, the patent holder (whether the original inventor or an assignee) will have already incurred sunk costs in developing or commercializing the patented technology, including through enforcement and licensing efforts. The proposed incremental value test, however, would not compensate the patent holder for that investment at all, and would create an imbalance in the negotiating positions of patent holders and infringers that strongly favors infringers, which as commented previously would be even more imbalanced if rights to injunctive relief were eliminated.

Fifth, in the standard-setting context, the distortion of invention- and innovation-enhancing incentives will be even more pronounced under the *IP Report*'s approach to hold-up and incremental value. By definition, the standards process picks winners and losers by selecting one technology over another. Consistent with the patent law's policy to encourage a race to invent, the standards process also seeks to encourage the availability of technically optimal solutions for consideration in the standardization process. These very well may be patented solutions, and although there are not always real technical alternatives before a standard is adopted, the standards process at least is designed to provide incentives for technology owners to create and contribute the greatest amount of "best" technology as possible, whether or not patented, and allow the standards process to develop a consensus around a preferred technology. But the greater the number of candidate technologies, the smaller may be the incremental value of one technology over another, and if the value realizable by an owner of a standards-essential patent is capped by what will be the small incremental difference in value between its technology and the technology not accepted for inclusion in the standard, the incentive to contribute optimal technology to the standards process will be undermined.

Sixth, the *IP Report*'s approach to hold-up and incremental value ignores the economic reality that inventors already gain only a small fraction of the total social value created by their inventions, while users of their inventions, including downstream product and service providers, as well as consumers, capture the lion's share of overall social value.[37] *A Strategy for American Innovation*, issued by the National Economic Council, the Council of Economic Advisers, and the Office of Science and Technology Policy in February 2011, explains this point succinctly:

> The social gains from innovation typically greatly exceed the private return. For example, the inventions of the telephone, transistor, light bulb, dishwasher, laser CT scan, web browser and antibiotics have all had enormous, broad and ongoing social benefits far in excess of any commercial profits

[35] 157 Cong. Rec. S1373–74 (daily ed. Mar. 8, 2011). *Cf.* Ramirez & Kimmel, *supra* note 2, at 9 (calling for courts to exercise their gatekeeping function "more vigorously by excluding expert opinions that are based on facts or methods that have no bearing on the outcome of a hypothetical negotiation between the parties in the case").

[36] *See, e.g.*, Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301 (Fed. Cir. 2009); ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860 (Fed. Cir. 2010); Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292 (Fed. Cir. 2011). These cases also demonstrate that even assuming there was truth to the assertion that patent damages have been excessive, courts are well-equipped to ensure proper calculations. Recent studies, however, indicate that median damage awards have remained relatively stable year after year. *See* PriceWaterhouseCoopers, 2008 Patent Litigation Study, *available at* http://www.pwc.com/en_US/us/forensic-services/assets/2008_patent_litigation_study.pdf.

[37] Einer Elhauge, *Do Patent Holdup and Royalty Stacking Lead to Systematically Excessive Royalties?*, 4 J. Competition L. & Econ. 535, 553–70 (2008) (suggesting that patent owners may be under-compensated for their inventive investments).

enjoyed by the original creators. General estimates suggest that the private profits from an innovation typically account for a tiny fraction—a few percent—of the social value.[38]

Seventh, the *IP Report* reflects a competitive policy choice favoring one segment of the economy (manufacturers and sellers of products based on patented technology) over another (the owners of the patented technology). But this type of competitive policy decision is the responsibility of Congress, and not the FTC, the courts, or others.[39] And Congress has spoken, most recently through the America Invents Act.

Moreover, the policy choice reflected in the* IP Report *ignores the complementary balance that has long been recognized by the courts and the FTC—that competition is properly advanced through effective enforcement of both the antitrust and the patent laws.

Moreover, the policy choice reflected in the *IP Report* ignores the complementary balance that has long been recognized by the courts and the FTC—that competition is properly advanced through effective enforcement of *both* the antitrust and the patent laws.[40] The *2007 IP Report* succinctly explains that these two bodies of law "share the [same] fundamental goals of enhancing consumer welfare and promoting innovation . . . work[ing] in tandem to bring new and better technologies, products and services to consumers at lower prices."[41] As further explained by former Assistant Attorney General Thomas Barnett, the complementary nature of the antitrust and patent laws maintains the proper balance between static and dynamic efficiencies. Static efficiency refers to competition that occurs within an existing technology whereby firms compete primarily by cutting costs, making incremental improvements to efficiency, and lowering prices.[42] Imposing caps on royalties that would lower costs to manufacturers is an example of a static efficiency. Dynamic efficiency, on the other hand, refers to competition "that does not merely improve upon old methods, but leaps ahead into something new."[43] The invention of new technologies through the investment of risk capital and its subsequent commercialization reflects dynamic efficiency. And, according to one observer, "dynamic efficiency . . . is responsible for the vast majority of economic growth and increased consumer welfare."[44] But if the return a patent owner will be able to

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[38] Nat'l Econ. Council, Council of Econ. Advisers & Office of Science and Tech. Policy, A Strategy for American Innovation 10 (Feb. 2011), *available at* http://www.whitehouse.gov/sites/default/files/uploads/InnovationStrategy.pdf. The S*trategy* identified three reasons why social gain exceeds private return. "First, users will only pay for the innovation if its benefits exceed its price. These consumer benefits—the 'consumer surplus'—mean that much of the innovation's value will immediately accrue to users. Second, the innovative business will face pressures to lower prices as other businesses imitate and improve upon the successful innovation . . . . Finally, a successful innovation often launches hosts of additional innovations by other firms, the benefits of which are not captured by the original innovator." *Id.*

[39] *See* United States v. Topco Assocs., 405 U.S. 596, 611–12 (1972) ("If a decision is to be made to sacrifice competition in one portion of the economy for greater competition in another portion this . . . is a decision that must be made by Congress and not by private forces or by courts. . . . To analyze, interpret, and evaluate the myriad of competing interests and the endless data that would surely be brought to bear on such decisions, and to make the delicate judgment on the relative values to society of competitive areas of the economy, the judgment of the elected representatives of the people is required.").

[40] *See* Simpson v. Union Oil Co., 377 U.S. 13, 24 (1964) ("The patent laws . . . are in *pari materia* with the antitrust laws and modify them *pro tanto*.").

[41] *2007 IP Report*, *supra* note 21, at 1. *See also* Thomas O. Barnett, Ass't Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Interoperability Between Antitrust and Intellectual Property, George Mason Univ. School of Law Symposium, Managing Antitrust Issues in a Global Marketplace 1–2 (Sept. 13, 2006) ("Antitrust and intellectual property policy are complements in that both seek to create a set of incentives to encourage an innovative, vigorously competitive marketplace that enhances efficiency and improves consumer welfare"), http://www.justice.gov/atr/public/speeches/218316.pdf.

[42] Barnett, *supra* note 41, at 2.

[43] *Id.* at 3.

[44] Hill B. Wellford, Counsel to the Ass't Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Antitrust Issues in Standard Setting, Second Annual Seminar on IT Standardization and Intellectual Property, China Electronics Standardization Inst. 3 (Mar. 29, 2007), http://www.justice.gov/atr/public/speeches/222236.pdf.

realize through royalties is capped, whether by the *IP Report*'s proposed incremental value test or otherwise, the incentives to invest in activities that advance dynamic efficiencies will be harmed. The *IP Report*'s approach to hold-up threatens such a result.

Eighth, the *IP Report*'s approach to hold-up and incremental value also ignores the realities of licensing conduct. Licensing of wireless communication patents is illustrative. There have been many thousands of patents declared by hundreds of companies as potentially essential to 2G, 3G, and now 4G wireless standards. To access these patents efficiently, firms typically engage in extensive portfolio licensing and cross-licensing, thus realizing efficiencies and broad operating freedom free from threats of infringement suit. But to determine the retrospective incremental value of an entire portfolio as against an unbounded set of potential "alternatives" is an impossible task. It just could not be done with any practical accuracy. This is particularly true because, even without portfolio licensing and cross-licensing, the "value" of a patent and its alternatives can change dramatically over time as the result of market developments, new and competing and complementary technologies, and further investments by the parties and third parties.[45] The *IP Report*'s incremental value test simply will not work as proposed.

In sum, the *IP Report*'s definition of hold-up and its proposals for a sweeping reordering of legal and policy standards, most notably by the imposition of the proposed artificial incremental value test, should not be substitutes for the marketplace-driven determinations of royalties, fees, and other value that a patent owner may obtain through either licensing negotiations or litigation. Substituting an ironclad rule for the flexibility of marketplace negotiations and existing standards for determining reasonable royalties will also limit the ability of patent users to gain a competitive advantage over other users by emphasizing certain licensing terms over others (monetary and non-monetary) that they believe will best advance their business strategies, and by moving faster to obtain licenses and avoid infringing conduct. Imposition of the incremental value rule as proposed would eliminate the benefits of such competitive foresight, and instead award the infringer (or simply the less insightful or slower moving patent user) with an adjustment of the competitive playing field in its favor.

None of the foregoing discussion should be understood to suggest that concerns are not legitimate in connection with conduct that might properly be considered as hold-up—for example, where a patent owner willfully engages in unlawful conduct by intentionally misrepresenting or omitting information concerning its patented technology, thereby inducing firms to engage in otherwise infringing conduct as the result of the patent owner's unlawful conduct, and causing a competitive distortion in the marketplace. If such conduct can be proven, the law (whether antitrust, patent, common law contract, or equitable principles) provides remedies. But systematic reordering of the patent laws or standards process of the sort suggested by the *IP Report* is not necessary.

The Lack of Proof Establishing the Need for Reform

The *IP Report*'s proposals are even more questionable given the absence of any objective empirical evidence that current standards for patent enforcement and remedies have led to actual competitive or economic distortions, or constraints on innovation. Neither the *IP Report* nor its proponents have made such a showing. And contrary to the somewhat alarmist and empirically unsupported cries of widespread patent hold-up and a broken patent system, available objective evidence indicates the absence of any systemic problems and, indeed, the existence of robust innovation and competitiveness.

[45] *See* Comments of Epstein et al., *supra* note 12, at 41–43.

[A]vailable objective evidence indicates the absence of any systemic problems and, indeed, the existence of robust innovation and competitiveness.

Comments submitted in connection with the FTC's Patent Standards Workshop are on point. A number of commenters explained that they simply had not experienced the type of hold-up problem identified by the *IP Report*. These submissions are significant because they represent the views of organizations representing a broad range of interests, not just the views of a small group or class of stakeholders that may have strategic or competitive reasons to seek reforms that will advance their own business models and strategies.

The American National Standards Institute, for example, reported that only "a relatively small number of questions have ever been formally raised regarding the ANSI Patent Policy, including issues relating to improper 'hold up.'"[46] The comments of the Telecommunications Industry Association (TIA) and the Alliance for Telecommunications Industry Solutions (ATIS) are even more instructive. TIA and ATIS are the two leading U.S.-based organizations developing standards for all generations of wireless technologies. Commenting on the FTC's definition of hold-up, TIA states that it "has never received any complaints regarding such 'patent hold-up'" and it "believes that the FTC is presuming that 'patent hold-up' is a widespread and fundamental problem, without considering the practical experiences of standard-setting organizations such as TIA."[47] ATIS similarly reported that it "has not experienced the hold up problem [as identified by the FTC], nor has any such problem impeded in any way ATIS's standards development efforts."[48] Further, according to the Association for Competitive Technology, small businesses are "not convinced that there is a wide-spread patent hold-up problem."[49] The U.S. Chamber of Commerce reported that "empirical evidence supporting a concern with a widespread risk of holdup is lacking."[50] Similarly, the American Intellectual Property Law Association (AIPLA) commented that the FTC's Request for Comments " [a]ppears to suggest that there may be reasons for substantial concern arising from the incorporation of royalty-bearing patented technologies in technical standards," but that the AIPLA "does not share this view."[51] Other submissions were to like effect.[52]

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[46] Comments of American National Standards Institute 12 (June 10, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00006-60456.pdf.

[47] Comments of Telecommunications Industry Association 4 (June 14, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00016-60530.pdf.

[48] Comments of Alliance for Telecommunications Industry Solutions 1 (June 14, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00015-60529.pdf. The author is outside counsel for ATIS and assisted in the preparation of ATIS's comments.

[49] Comments of Association for Competitive Technology 2 (Aug. 5, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00050-80203.pdf.

[50] Comments of the U.S. Chamber of Commerce 8 (Aug. 5, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00047-80186.pdf.

[51] Comments of AIPLA 2 (June 14, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00012-60634.pdf. The author chairs the AIPLA Antitrust Committee and contributed to the comments prepared by that committee, which were approved by the AIPLA Board of Directors for submission to the FTC.

[52] Professor Jay P. Kesan of the University of Illinois College of Law commented that "there is little or no empirical evidence indicating that there is a significant problem with patent 'hold up'." Comments of Jay Kesan 2 (June 14, 2011), available at http://www.ftc.gov/os/comments/patentstandardsworkshop/00022-60546.pdf. Similarly, Keith Mallinson of WiseHarbor, a leading wireless industry consultant, reported that "there has been no evidence of 'windfall gains' to patent owners impeding the adoption of any technology-based standards." Comments of WiseHarbor 8 (June 12, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00007-60459.pdf. *See also* Comments of Microsoft Corp., *supra* note 11, at 16 (there is "little evidence that 'patent hold-up' in the standards context is a real problem"); Comments of InterDigital, Inc. 2 (Aug. 5, 2011) ("based on our firsthand experience participating in industry standards, we do not believe that the current policies and practices of the various standards organizations in the wireless industry lead to unreasonably high prices to consumers, or otherwise result in market distortion"), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00043-80175.pdf; Comments of Epstein et al., *supra* note 12, at 14 ("the success on the ground bears out the theoretical insight that hold-ups are not a serious threat to collaboration over and around standards").

Some commenters took a contrary view, opining, for instance, that hold-up in the standards context specifically is, in fact, real, and greater intervention and structural reform are necessary.[53] But while suggesting that hold-up is a serious problem requiring attention and government intervention, these comments offer no empirical or quantitative proof of systemic distortion of the standards process or the patent system and offer no showing why existing remedies are not sufficient to deter actual unlawful or anticompetitive conduct.[54]

At the closing of the FTC's Patent Standards Workshop, Joseph Farrell commented that the absence of proof did not mean that there is not a hold-up problem.[55] Such a statement, however, provides little ground for the radical transformation that would result from the *IP Report*'s recommendations.[56] Identification of speculative or theoretical risks may present interesting academic issues, but hardly justifies policy decisions of the sort being made by the FTC. Farrell's suggestion that the absence of evidence of a hold-up problem results from the silence of consumers[57] is also questionable, given the abundance of evidence over the past decade and longer of advancements of technology, the entry of competitors, and the introduction of new products with enhanced features and functionality, combined with declining costs, all of which have directly benefited consumers.

As estimated by the U.S. Patent and Trademark Office, tens of thousands of standards are approved annually, as international and American National Standards,[58] and many more tens of thousands of technical reports and specifications are developed by standard-setting bodies around the world each year. Many of these standards and other technical documents incorporate patented technology and have led to the rapid uptake of standards-compliant products and services based on such technologies, without any evidence of a systemic breakdown in standard setting or the patent system. If anything, the handful of cases that have addressed what might be considered hold-up under any definition, if anything, illustrate the ability of parties to pursue remedies to address actionable conduct.[59]

The enormous contribution to innovation made by patented technologies in the wireless technology sector, specifically through the successful adoption and promulgation of such technologies through standardization, illustrates the success realized under the status quo. The technological

[53] *See, e.g.*, Comments of Cisco Systems, Inc. (for Cisco and RIM) (June 17, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00025-60567.pdf; Comments of Broadcom Corp. (Aug. 5, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00053-80206.pdf; Comments of Cisco Systems, Inc. (for Cisco, HP, IBM and RIM) (Aug. 1, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00035-80135.pdf; Comments of Verizon Communications Inc. (Aug. 5, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00051-80236.pdf. *See also* George S. Cary et al., *The Case for Antitrust Law to Police the Patent Holdup Problem in Standard Setting*, 77 Antitrust L.J. 913 (2011).

[54] *See* Roger C. Brooks, *Patent "Hold-Up," Standards-Setting Organizations and the FTC's Campaign Against Innovators*, 39 AIPLA Q.J. 435, 438 (2011) ("[T]he recommendations in the Report appear to be based on uncritical reliance on unsupported assertions by licensees with particular business models, and on simplified economic constructs that bear no relationship to real markets, IP licensing or otherwise.").

[55] Closing Remarks of Joseph Farrell, Dir. of FTC Bureau of Economics, FTC Patent Standards Workshop, Tr. at 239 ("[W]e can't assume that the presence of a dispute means the presence of a problem. We also can't assume that the absence of a dispute means the absence of a problem."), *available at* http://www.ftc.gov/opp/workshops/standards/transcript.pdf.

[56] *See* Comments of InterDigital, Inc., *supra* note 52, at 3 ("[I]n the absence of any empirical data suggesting the current system of standardization does not adequately serve consumer interests, it would be misguided to seek to scale back or restrict intellectual property protection for patents generally, and for standards-essential patents particularly.").

[57] Closing Remarks of Joseph Farrell, *supra* note 55, Tr. at 239–41.

[58] Statement of the United States by the U.S. Patent & Trademark Office to the World Intellectual Property Organization Patent Committee Meeting 2 (Mar. 2008), *cited in* Comments of U.S. Chamber of Commerce, *supra* note 50, at n.38.

[59] *See, e.g.*, Broadcom Corp. v. Qualcomm Inc., 501 F.3d 297 (3d Cir. 2007).

advances in this sector also reflect the benefits consumers have realized from the introduction of new products and services. Keith Mallinson, for example, points to "the successful deployment and rapid growth" of the patent-heavy GSM and WCDMA technologies as such proof.[60] More specifically, Mallinson reports that "[s]uccessive generations of mobile technology have increased massively in performance with end-user data rates increasing 1,000-fold in 20 years," from 56 kilobits per second in the mid-1990s to tens of megabits per second today, and that by 2020 new technology will provide 5.5 times the network capacity achieved by existing 3G technologies while using the same amount of spectrum. "Other standards-based innovations have substantially improved voice encoding, reduced power consumption, and enabled multimedia messaging and location tracking."[61] Standards implementers—that is, users of the patented technology incorporated in wireless standards—have also benefited from the breakneck pace of innovation in wireless technology, as have consumers. For example, the number and types of smartphones offered in the United States have grown dramatically over the past five years, with ever-expanding offerings of features and functions.[62] And "mobile operators are as eager as ever to invest in new technologies to improve performance and lower total costs. New technology cost savings outweigh licensing fees."[63] For consumers, based on total ownership expenditures, it also cannot be said that patent fees or costs constrain demand for even more innovation at a faster pace, further belying any suggestion that innovation has been impeded by a strong patent environment.[64]

Finally, given the attention devoted to non-practicing entities (NPEs) and patent assertion entities (PAEs) by the *IP Report* to support adoption of special remedy rules for these entities,[65] the actual data are also revealing. According to statistics cited in the *IP Report*, PAE infringement suits account for 17 percent of suits of computer-related patents between 2000 and 2008 (and 26 percent of defendants because many such suits name multiple defendants).[66] But as former Chief Judge Paul Michel of the Federal Circuit observed, he was not convinced that there had been any meaningful increase in patent cases in total, or that the cost of infringement cases was attributable to the greater number of cases rather than the high costs of civil discovery in all cases.[67] Moreover, as recently reported by PriceWaterhouseCoopers, the median damages recovery in

[60] Comments of WiseHarbor, *supra* note 52, at 7 ("The flourishing market for mobile phones, which have transformed our business and daily lives, is evidence of the success of the economic incentives created by the IP system and the market-driven FRAND framework for licensing standards-essential IPR.").

[61] *Id.* at 10.

[62] Comments of WiseHarbor 20–23 (July 26, 2011), *available at* http://www.ftc.gov/os/comments/patentstandardsworkshop/00033-80105.pdf.

[63] Comments of WiseHarbor, *supra* note 52, at 18.

[64] *Id.* at 18–22.

[65] *See, e.g.*, *IP Report*, *supra* note 1, at 59–72 (suggesting that PAEs may be increasing the problem of patent "hold up"); Ramirez & Kimmel, *supra* note 2, at 3 ("PAEs may exacerbate the risks associated with patent hold-up"); Su, *supra* note 2, at 4–6 (NPEs potentially harm innovation by asserting acquired patents).

[66] *IP Report*, *supra* note 1, App. A.

[67] Paul R. Michel, Chief Judge, U.S. Ct. of App. for the Fed. Cir., Where Are We Now on Patent System Improvements and How Can We Best Make Further Progress?, Address to FTC Hearing on the Evolving IP Marketplace 2–3 (Dec. 5, 2008), *available at* http://www.cafc.uscourts.gov/images/stories/announcements/2008/FTCspeech.pdf. Judge Michel's observations regarding the costs of patent litigation are borne out by recently released data by AIPLA showing that the cost of patent litigation of all sizes has been steady from 2005 through 2011, and for the largest cases the overall cost actually decreased by 9% from 2009 to 2011. AIPLA, 2011 REPORT OF THE ECONOMIC SURVEY 35–36, I-153–I-156 (2011), *available at* http://www.aipla.org/learningcenter/library/books/econsurvey/2011/Pages/default.aspx (membership required).

2010 was the lowest in the period 1995–2010, with a downward trend of median patent damages awards since 2005 (with only one aberrational year), further suggesting no distortion of the patent system requiring a systemic overhaul.[68]

Pointing at NPEs and PAEs as undermining innovation also misses the important role such entities can play in advancing innovation. Sixty percent of U.S. patents are granted to small inventors; yet less than 10 percent of U.S. patent revenues are realized by small inventors.[69] This disproportionate allocation of revenues as compared to inventiveness may be understood to confirm the generally observed fact that small inventors have difficulties commercializing their inventions and stand a very high risk that large, well-capitalized patent users (including those technology manufacturing firms that are seeking the type of radical change to the patent laws promoted by the *IP Report*) will misappropriate their inventions, betting that small inventors will not be able to weather the battle of litigation, or will simply settle for a fraction of the invention's worth. What the FTC characterizes as NPEs or PAEs are a source of risk capital that small inventors can use to commercialize or defend their inventions against such misappropriation and thus can facilitate and enhance innovation and competitiveness.[70]

It does not follow, however, that the entire focus of existing patent laws, and the incentives the patent laws provide for advancing innovation, should be overturned.

Conclusion

No doubt the environment for innovation can always be improved. It does not follow, however, that the entire focus of existing patent laws, and the incentives the patent laws provide for advancing innovation, should be overturned. This is especially so in the absence of compelling objective evidence of a broken system, lest the remedy be worse than the offense.

The FTC's *IP Report* seemingly takes this latter approach, and by so doing risks undermining the incentives for investment in invention—and innovation-enhancing efforts. And it does so based on: a questionable definition of hold-up, and despite a lack of evidence that there is any systemic problem that requires reform; Congressional action contrary to the IP Report's proposals; and recent Supreme Court and Federal Circuit decisions that already address the issues raised by the *IP Report*,[71] and that reject "categorical rules that might have wide-ranging and unforeseen impacts," favoring instead a case-by-case approach to enforceability, remedy and procedural issues.[72]

Given these circumstances, the FTC might determine it appropriate to reconsider the *IP Report*. ●

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[68] PriceWaterhouseCoopers, 2011 Patent Litigation Study 9, *available at* http://www.pwc.com/en_US/us/forensic-services/publications/assets/2011-patent-litigation-study.pdf.

[69] Presentation of Peter N. Detkin, *To Promote the Progress . . . of Useful Arts: Investing in Invention, FTC Hearings on the Evolving IP Marketplace* 3 (Dec. 5, 2008), *available at* http://www.ftc.gov/bc/workshops/ipmarketplace/dec5/docs/pdetkin.pdf.

[70] *See* Damien Geradin, Anne Layne-Farrar & A. Jorge Padilla, *Elves or Trolls? The Role of Non-Practicing Patent Owners in the Innovation Economy*, TILEC Discussion Paper No. 2008-018 (May 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1136086.

[71] *See* cases cited *supra* note 36.

[72] *See* Bilski v. Kappos, 130 S. Ct. 3218, 3229 (2010); *see also* eBay Inc. v. MercExchange LLC, 547 U.S. 388 (2007); KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398 (2007); *In re* TS Tech USA Corp., 551 F.3d 1315 (Fed. Cir. 2008).