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Intellectual Ventures v. Capital One: Can Antitrust Law and Economics Get Us Past the Trolls?

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I. INTRODUCTION

Patent trolls are currently under intense scrutiny by lawmakers, regulators, academics, and industry players. The term "patent troll" generally refers to patent owners that do not make or sell products, and instead focus on licensing and litigation to monetize their acquired patents. These entities are also known as "patent assertion entities" (PAEs)[2], and in this paper, we use the terms interchangeably. Infringement suits brought by trolls have exploded over the last few years—in 2012 patent trolls accounted for 62 percent of all patent infringement suits,[3] and recent studies estimate that trolls imposed direct costs of $29 billion in 2011.[4] And these costs appear to be deterring investment in new businesses and technologies—one study estimated that venture capital funding was $8.1 billion lower over a five-year period than it would have been without PAE enforcement.[5]

Although most commentators have concluded that many patent troll business models lead to market inefficiencies, it is not clear what can be done in the short term to address the wide variety of concerns that troll activities raise.[6] Various legislative solutions have been suggested

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[2] According to the FTC, a PAE "focuses on purchasing and asserting patents against manufacturers already using the technology, rather than developing and transferring technology" to licensees. FTC, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* at 8 (March 2011) *available at* http://www.ftc.gov/reports/evolving-ip-marketplace-aligning-patent-notice-remedies-competition. The term typically does not include development firms that offer their patented technologies to licensees in advance, university research laboratories, and the like. *See* Thomas A. Hemphill*, The Paradox of Patent Assertion Entities*, American Enterprise Institute, (August 12, 2013) *available at* http://www.american.com/archive/2013/august/the-paradox-of-patent-assertion-entities.

[3] Colleen Chien, *Patent Trolls by the Numbers* (Santa Clara Univ. Sch. of Law, Legal Studies Research Paper No. 08-13, 2013), *available at* http://papers.ssrn.com/abstract=2233041.

[4] James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 CORNELL L. REV. 387, 389 (2014).

[5] Catherine E. Tucker, *The Effect of Patent Litigation and Patent Assertion Entities on Entrepreneurial Activity*, (May 15, 2014) *available at* https://cdn.arstechnica.net/wp-content/uploads/2014/06/Tucker-Report-5.16.14.pdf (analyzing frequent patent litigators as a proxy for patent assertion entities). The study indicated that most patent litigation increased venture capital investment up to a point, with high levels of litigation eventually lowering investment. In contrast, litigation by frequent patent litigators had no initial positive effect on venture capital investment at all. *Id.* at 2.

[6] In a recent survey of economists, only 2 percent agreed with the statement that PAEs "promote innovation in the U.S." compared to 47 percent that disagreed or strongly disagreed. *See* IGM Economic Experts Panel (June 24,

and attempted, but these do not address the full scope of the problem.[7] Attempts to bring antitrust claims against trolls also largely have failed, as in the case of *Intellectual Ventures I LLC v. Capital One Financial Corp*.[8] Using the facts alleged by *Capital One* as a case study, we suggest that antitrust law can curb some of these abuses immediately, and we explore alternative approaches to the antitrust claims in that case that could lead to a different outcome in future litigation. In particular, we observe that, by concealing the scope of a large patent portfolio, a PAE can diminish incentives to design-around individual technologies within that portfolio, thereby reducing the viability of competing technologies in those individual technology markets.

A. Economic Implications of Patent Trolls

Although we focus in this article on certain abuses associated with patent trolls, there are potential benefits to troll activity. A key benefit—and also what often enables abuse—is their large-scale purchase of patents. Because PAEs are often better able than smaller individual inventors to identify infringers, negotiate licenses, and litigate infringement suits, PAEs can afford to purchase patents that those smaller inventors might be unable to monetize. By creating a liquid market for patents, PAEs allow inventors to obtain a return on their research efforts, which can stimulate additional innovation.[9]

Moreover, by purchasing large numbers of related patents, a patent troll can facilitate licensing by creating a broad package of complementary patents that a particular industry player might practice. Where those patents are licensed to manufacturers at economically justified royalty rates, PAEs can lower transaction costs by reducing the number of licenses needed, and lessening the problem of royalty stacking that can arise when different patents related to the same end product are owned by many different entities.[10] Once these broad licenses are concluded, manufacturers are closer to design freedom and can more confidently engage in follow-on research and development.

These same patent acquisitions and licensing negotiations, however, can—and have—created competition issues. First, many PAEs exploit the lack of transparency in patent ownership to amass huge portfolios of “secret” patents that are then asserted against manufacturers. Manufacturers faced with a royalty demand based on a large number of unidentified patents cannot determine an appropriate royalty, or even whether any royalty is owed at all. That uncertainty may lead to manufacturers paying supracompetitive royalties that can depress product innovation.

2014), *available at* http://www.igmchicago.org/igm-economic-experts-panel/poll-results?SurveyID=SV_2nOHADwYJU1mkhD.

[7] See below, notes 15 and 20.

[8] 2013 WL 6682981 (E.D. Va. Dec. 18, 2013).

[9] Increasing the percentage of patents enforced also increases the frequency with which patents of questionable validity are enforced, which could be problematic given the significant expense of demonstrating invalidity. Because issued patents are presumptively valid, however, this concern is generally best approached through the laws and procedures governing the issuance of patents, rather than through competition law.

[10] This is a reflection of the “Cournot complements” problem. When multiple parties own patents covering a downstream product, each IP owner will charge a profit-maximizing price without sufficient regard for an impact on the total cost of the IP covering the downstream product.

Second, PAEs typically assert patents against products that are already on the market, which can lead to royalties that do not reflect the inventive value the patents contribute to the licensed inventions, but rather reflect the fact that the manufacturer or user of the technology is "locked-in." The economic value of a patented technology is the amount a manufacturer would be willing to pay to use that technology instead of an alternative technology available at the time the product is being designed.[11] But because PAEs frequently target products that are already in production, manufacturers often face high or prohibitive switching costs, even if they could have used many acceptable alternative technologies early in the development process.

Once a manufacturer is locked-in, it is potentially willing to pay up to the cost of re-designing its product and manufacturing facilities, well above the intrinsic value of the specific technology. This difference between the *ex ante* value of the technology and the *ex post* negotiated royalty is referred to as the "hold-up value." Although understandable as a matter of bargaining theory and permitted by patent law, it is inefficient for a PAE to extract hold-up value because it reduces the incentive of manufacturers to design and sell innovative products.[12] Ultimately, these inflated royalties will be passed on to consumers, through higher prices, reduced product choice, or both.

B. Recent Regulatory and Legislative Developments

These concerns have prompted a great deal of recent activity. The U.S. Federal Trade Commission ("FTC") and Department of Justice Antitrust Division ("DOJ") held a Patent Assertion Entity Activities Workshop in December 2012 to explore the implications of PAEs, and potential mechanisms for addressing abuses.[13] Since then, the FTC has begun a study of PAEs under Section 6(b) of the FTC Act, which is ongoing.[14]

Congress is considering legislation that would address certain narrow issues associated with fraudulent demand letters,[15] and even the White House has weighed in with a report finding

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[11] Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUMBIA L. REV. 2117, 2143 (2013) ("the economic value of a patent, and thus the economically appropriate royalty for use of the patented technology, is widely understood to be the difference between the value of the patented technology and the next best alternative, determined before technologies are chosen and users are more or less locked into them."); Federal Trade Commission, *The Evolving IP Marketplace*, at 8 (March 2011) ("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.").

[12] The issue of patent hold-up has been the subject of much litigation in infringement proceedings involving standard essential patents. *See, e.g., Broadcom v. Qualcomm*, 501 F.3d 297, 314 (2007) ("We hold that (1) in a consensus-oriented private standard-setting environment, (2) a patent holder's intentionally false promise to license essential proprietary technology on FRAND terms, (3) coupled with an SDO's reliance on that promise when including the technology in a standard, and (4) the patent holder's subsequent breach of that promise, is actionable anticompetitive conduct.").

[13] *See* FTC, Patent Assertion Entity Activities Workshop (Dec. 10, 2012) *available at* http://www.ftc.gov/news-events/events-calendar/2012/12/patent-assertion-entity-activities-workshop.

[14] Fed. Trade Comm'n, Notice and Request for Public Comment on PAE Activity, 79 Fed. Reg. 28,715 (May 19, 2013), *available at* http://www.gpo.gov/fdsys/pkg/FR-2014-05-19/pdf/2014-11484.pdf.

[15] *See* Prepared Statement of the Federal Trade Commission on Discussion Draft of Patent Demand Letter Legislation before the Subcommittee On Commerce, Manufacturing, And Trade of the Committee On Energy And

that "PAE activities hurt firms of all sizes," and calling for clarification of patent scope, reduction of litigation costs, and greater flexibility in the patent system to address challenges raised by new technologies and business methods.[16]

The conduct of one patent troll, MPHJ Technology Investments LLC, has been particularly instrumental in spurring the FTC and several states to action. MPHJ sent demand letters—through 81 different subsidiaries—to over 16,000 small companies offering licenses for around $1,000 to patents it claims cover scanning documents to email, while at the same time falsely representing that it had already licensed many companies on similar terms.[17] MPHJ has settled with the FTC and the New York Attorney General,[18] and has been sued by the states of Nebraska and Vermont.[19] Nine states have passed legislation to curb this type of abuse, while many more are considering such legislation.[20]

However, such legislative activity is of little comfort to a company facing demands from a patent troll today. Future changes to infringement proceedings or patenting standards will take time to develop, and legislation targeted at grossly inappropriate demand letters like MPHJ's may not cover more subtle PAE conduct. This paper focuses on the *Intellectual Ventures v. Capital*

Commerce, United States House of Representatives (May 22, 2014), *available at* http://www.ftc.gov/system/files/documents/public_statements/310821/140522patentdemandltrs.pdf; *see also* "Demand Letter Transparency Act of 2013," H.R. 3540 (Referred to the Subcommittee on Courts, Intellectual Property, and the Internet on January 9, 2014) (requiring demand letters to include, *inter alia*, information on specific patent claims asserted), *information available at* https://beta.congress.gov/bill/113th-congress/house-bill/3540/; "Patent Transparency and Improvements Act of 2013," S. 1720 (referred to the Committee on the Judiciary on Nov. 18, 2013) (requiring patent assignments to be recorded by the PTO) *information available at* https://beta.congress.gov/bill/113th-congress/senate-bill/1720/.

[16] Executive Office of the President, "Patent Assertion and U.S. Innovation" at 1 (June 2013), *available at* http://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf.

[17] Complaint Ex. F at ¶¶ 11, 20, 23, *MPHJ Technology Investments, LLC v. Federal Trade Commission*, No. 6:14-cv-00011 (W.D. Tex. Jan. 13, 2014).

[18] Agreement Containing Consent Order, *In the Matter of MPHJ Technology Investments, LLC*, FTC No. 142-3003 (Nov. 6, 2014) *available at* http://www.ftc.gov/enforcement/cases-proceedings/142-3003/mphj-technology-investments-llc-matter; Press release, *A.G. Schneiderman Announces Groundbreaking Settlement With Abusive "Patent Troll*," (Jan. 14, 2014) *available at* http://ag.ny.gov/press-release/ag-schneiderman-announces-groundbreaking-settlement-abusive-%E2%80%9Cpatent-troll%E2%80%9D. MPHJ sought to block the FTC's investigation through a declaratory judgment action challenging it as a violation of its First Amendment rights. The court dismissed MPHJ's suit because any objection to claims that the FTC might bring was not yet ripe, nor had administrative remedies been exhausted. *See MPHJ Technology Investments, LLC v. Federal Trade Commission*, No. 6:14-cv-00011, 2014 U.S. Dist. LEXIS 146288 (W.D. Tex. Sept. 16, 2014).

[19] *See, Vermont and Nebraska Attorneys General Take Patent Trolls Head On* (NAAGAZETTE) *available at* http://www.naag.org/vermont-and-nebraska-attorneys-general-take-patent-trolls-head-on.php. In Vermont, MPHJ has been unsuccessful in removing the case to federal court, and the state court found personal jurisdiction based on the sending of the demand letters to targets within the state. *See Vermont v. MPHJ Tech. Investments*, No. 282-5-13 (Vt. Super. Ct. Aug. 28, 2014). In Nebraska, after the attorney general issued a cease and desist order, MPHJ and a similarly situated company, Activision, successfully blocked enforcement of the orders in federal court on the ground that the demand letters were protected by the *Noerr-Pennington* doctrine. *Activision TV v. Pinnacle Bancorp*, No. 13-cv-215, Dkt. No. 189 (D. Neb. Sept. 2, 2014).

[20] *See, e.g.*, Tony Dutra, *Nine States Now Have Enacted Legislation Targeting Patent Troll Demand Letter Abuse*, BLOOMBERG BNA (May 7, 2014) *available at* http://www.bna.com/nine-states-enacted-n17179890261/.

One case to consider whether and how the antitrust laws can be used immediately to ameliorate the problems posed.

II. *INTELLECTUAL VENTURES V. CAPITAL ONE*: A CASE STUDY

In *Intellectual Ventures v. Capital One,* the District Court ultimately dismissed all of the antitrust counterclaims, illustrating how difficult it can be to fit PAE conduct into existing antitrust jurisprudence. Nevertheless, we believe that the core concerns of antitrust law apply to this conduct, and that various alternative approaches could produce a different outcome. The *Capital One* case is presently on appeal to the Federal Circuit so we may soon have the benefit of further judicial guidance.[21]

A. Summary of the Case

Intellectual Ventures ("IV") sued Capital One for patent infringement based on Capital One's use of certain commercial banking technologies.[22] Capital One raised a patent misuse defense, and counterclaimed that IV had monopolized a market for technologies used in commercial banking in violation of Section 2 of the Sherman Act, and had violated Section 7 of the Clayton Act through its acquisition of patents.[23] According to Capital One, IV used its portfolio of 80,000 patents, including 3,500 related to financial institutions, to engage in "submarine hold-up" by concealing which patents it owned and then "threat[ening to] assert[] thousands of patents in a never-ending series of costly and disruptive patent infringement lawsuits—pummeling its victims into submission."[24]

The Court dismissed Capital One's counterclaims, essentially because it concluded that IV's conduct was protected by patent law.[25] Notably, the Court's opinion recites Capital's One's allegations concerning IV's structure and the secrecy surrounding its patent acquisitions and assertions, but does not feature these allegations in its analysis.[26] The court later held, on summary judgment, that IV's asserted patents were invalid, and dismissed the infringement claims.[27]

Capital One had argued, in opposition to IV's motion to dismiss the antitrust counterclaims, that:

> IV conceals its patent acquisitions through thousands of shell companies to cut off any possible route of escape for its targets—preventing them from assessing the portfolio or redesigning their products to avoid claims of infringement. IV then brings sham lawsuits designed solely to force its victims to pay exorbitant settlements, and threatens more and more litigation if they do not pay up. The

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[21] *See* Docket Nos. 14-1506, 14-1515 (Fed. Cir.).

[22] *Capital One*, 2013 WL 6682981 at *1.

[23] *Id.* at *1.

[24] *Id.* at *2.

[25] *Id.* at *10-11. The conduct does appear similar to what practicing entities do regularly—assert patents that cover products that do not necessarily compete with the patentee's products.

[26] *Capital One*, 2013 WL 6682981 at *1-3.

[27] *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 1:13-CV-00740 AJT, 2014 WL 1513273 (E.D. Va. Apr. 16, 2014).

> sheer volume of IV's patents, and the secrecy with which it maintains them, make IV's threats credible.[28]

Capital One alleged three anticompetitive effects flowing from this behavior. First, by threatening assertion of unnamed patents, IV "eliminates the economic incentive…to challenge the validity of individual patents within the portfolio."[29] Second, by taxing successful products, IV reduces the incentive of its potential targets to innovate.[30] And third, IV had charged others supracompetitive royalties, reflecting the hold-up value of its patents.[31] Capital One alleged that it suffered antitrust injury as a result of the constraints imposed on its design freedom, the reduction of its investment in innovation, and the costs and effort required to defend itself in the litigation.[32]

B. Economic Concerns Raised by Intellectual Ventures' Alleged Behavior

Before considering the elements of an antitrust claim, it is helpful to consider the economic concerns raised by the conduct alleged. First, to the extent that IV is threatening to put Capital One through a very expensive legal process that would justify a large settlement based on patents that are not actually valid and infringed, IV's conduct raises the specter of sham litigation. Such an approach, whereby transaction costs are manufactured out of the refusal to disclose the nature and extent of a massive portfolio rather than from a careful consideration of the actual scope of IV's intellectual property rights, is purely extortionate and serves no purpose other than to limit Capital One's incentives to innovate and introduce new services.

IV's refusal to disclose the nature and extent of its portfolio cannot be overcome by litigation discovery or a patent search. Of course, the limited discovery available in connection with the few patents asserted by IV in litigation would not reveal the nature and extent of the thousands of patents not asserted. Moreover, antitrust claims arising from the PAE's concealment of its portfolio for the purpose of enabling or enhancing the exercise of market power should not be rendered moot by any subsequent discovery that may provide some insight into the "secret" portfolio.[33] Given the massive number of patents controlled by IV and the complexities of conducting a patent search,[34] it surely would be difficult for Capitol One to

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[28] Capital One's Opposition to Intellectual Ventures' Motion to Strike or Dismiss Amended Antitrust Counterclaims 11, 12 and 13 and Motion to Dismiss Eighth Affirmative Patent Misuse Defense, *Intellectual Ventures I LLC v Capital One Financial Corp*., No. 13-cv-740, 2013 WL 7018289 at *1 (E.D. Va. Nov. 8, 2013).

[29] *Capital One*, 2013 WL 6682981 at *3.

[30] *Id.*

[31] *Id.*

[32] *Id.* at *4.

[33] *See, e.g.*, *Buckhannon Bd. and Care Home, Inc. v. West Virginia Dept. of Health and Human Resources*, 532 U.S. 598, 608-609 (2001) ("so long as the plaintiff has a cause of action for damages, a defendant's change in conduct will not moot the case."); *United States v. Concentrated Phosphate Export Assn., Inc.*, 393 U.S. 199, 203 (1968) ("Mere voluntary cessation of allegedly illegal conduct does not moot a case; if it did, the courts would be compelled to leave '[t]he defendant . . . free to return to his old ways.'" (*quoting United States v. W. T. Grant Co.*, 345 U. S. 629, 632 (1953))).

[34] Conducting patent searches prior to designing or launching a product is of limited utility. Indeed, the patent rights may not even exist at the time of the search because "it takes over three and a half years for the PTO to issue a patent, and [] for at least 18 months of that time the application is not published." Mark Lemley, *Ignoring Patents*, 2008 MICH. ST. L. REV. 19, 25 (2008) (companies in high technology industries like information technology may not

review all of IV's patents that could impact Capitol One's design choices, but IV is alleged to have made such a search *impossible* by hiding the patents in a "labyrinthine network of some 2,000 shell companies."[35]

Even if IV in fact owns valid, infringed patents, its decision to conceal what technologies those patents cover creates inefficiencies. The natural economic inference from such secretive conduct is that disclosing the full portfolio would lower royalties.[36] There are several potential mechanisms through which hiding the scope of the portfolio might allow IV to obtain inflated royalties: (i) Capital One may be prevented from designing around IV's patents (or attempting to do so); (ii) IV might be concealing that it holds obviously invalid, expired, or non-infringed patents; or (iii) IV might be hiding the fact that Capital One had licensed some of the patents before they were obtained by IV. Each of these circumstances presents Capital One with a misleading picture of its best alternative to a negotiated agreement and hence increases its willingness to pay.[37]

Although U.S. patent law does impose liability on implementers that independently develop infringing technology (i.e., without knowingly infringing),[38] IV's apparently exclusive focus on *ex post* licensing also can lead to inefficient outcomes. The economically appropriate royalty for a patent is the *ex ante* amount that an implementer would pay to use that technology before it is locked-in by incurring significant sunk costs associated with the feature.[39] By asserting its patents only on targets that already are locked-in, IV again increases the amount its targets are willing to pay.

Presumably, a PAE would counter that its focus on *ex post* licensing can be economically justified because the effect is merely a redistribution of "rents" from the implementer to the IP owner, and such redistribution should not raise competitive concerns because it does not restrain output. Yet, this viewpoint is only partly correct. While the short-term effects of hold-up may be mostly redistributive, the long-run consequences need not be. In particular, over the longer-run,

conduct patent searches prior to designing or launching their products). Even after a patent issues, the scope of patent claims is often unclear. These difficulties are particularly significant in the case of IV, where efforts to identify the scope of IV's portfolio have achieved only limited success. *See* Robin Feldman & Tom Ewing, *The Giants Among Us*, 2012 STAN. TECH. L. REV. 1, 4-5 (2012) (noting that "[t]he structure of the Intellectual Ventures network of operations makes it tremendously difficult to detect and trace the company's activities. … Our research has pieced together 1276 shell companies associated with Intellectual Ventures. We do not believe that we have identified all of the Intellectual Ventures shell companies, but these 1276 companies alone hold roughly 8000 US patents and 3000 pending US patent applications as of May 2011," and estimating IV held between 30,000 and 60,000 patents and applications in May 2011).

[35] Am. Counterclaims, ¶ 63.

[36] *See, e.g.*, Fiona Scott Morton & Carl Shapiro, *Strategic Patent Acquisitions*, 79 ANTITRUST L.J. 463, 476 (2014).

[37] A company's willingness to pay for a license depends on the value of the technology as compared to the value of other technologies that could be used as substitutes. Thus, a company may not be willing to pay a high royalty even for an effective technology if that technology has many similarly effective substitutes.

[38] Enhanced damages, however, are unavailable if the patent is unknown to the implementer. *See, e.g.*, *In re Seagate Technology, LLC*, 497 F.3d 1360, 1368 (Fed. Cir. 2007) ("Because patent infringement is a strict liability offense, the nature of the offense is only relevant in determining whether enhanced damages are warranted…. [W]e have held that an award of enhanced damages requires a showing of willful infringement.").

[39] Strategic Patent Acquisitions, 79 Antitrust L.J. at 471 ("Reasonable royalties, based on a hypothetical ex ante negotiation, should never exceed the ex ante incremental value of the patented technology.").

concerns with hold-up can steer the implementers towards less efficient technologies, increase the risks associated with innovative business solutions, and soak up resources that could be used for productive endeavors. In addition, such conduct can create potentially costly incentives to engage in inefficient attempts at design "flexibility" that might make designing-around more feasible and less costly, if such need were to arise. We now attempt to translate these economic concerns into a viable antitrust claim.

C. Sherman Act, Section 2

IV challenged Capital One's Section 2 claim on several grounds, including market definition, the allegation of market power, and IV's right to engage in the challenged conduct under the patent laws. As indicated, the court found for IV on each of these grounds, and dismissed the claim. We explore below potential departures from the court's reasoning and potential alternative ways in which the claim might have been formulated.

1. The Relevant Market

Capital One alleged that IV had monopolized the "*ex post* market for technology used to provide commercial banking services in the United States."[40] The court rejected that alleged relevant market, because Capital One alleged neither that it constituted an "area of effective competition between IV and the commercial banks," nor that the market included any of the reasonable substitutes for the included technologies.[41] The court did not agree that Capital One was "locked-in"[42] to using IV's technology *ex post* such that IV's technology became a relevant antitrust market under cases such as *Eastman Kodak Co.,*[43] *Broadcom Corp.,*[44] or *SESAC.*[45] The court observed that, in those cases, "the patents, copyrights or product lines at issue were controlled by a single company and the customers were locked in…without the availability of substitutes."[46] The court emphasized that the legitimacy of the patents, copyrights, and product lines was unchallenged in those cases, meaning that "the relevant market was defined in terms of what was a business necessity for the complaining businesses' lawful operation."[47]

It is not clear that the court successfully distinguishes Capital One's conduct from each of the lock-in cases cited,[48] but the Court's distinction of the *SESAC* case in particular merits further discussion. In that case, plaintiffs alleged that SESAC, a company that offered a blanket license to

[40] *Capital One*, 2013 WL 6682981 at *5.

[41] *Id.* (citing *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 1353 (Fed. Cir. 1999)).

[42] Capital One was locked in because it created its infringing services before it knew that IV had patent rights relating to it, and so would have had to incur switching costs to re-design its services.

[43] *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451 (1992).

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

[45] *Meredith Corp. v. SESAC, LLC*, 2011 WL 856266 (S.D.N.Y. Mar. 9, 2011) ("*SESAC*").

[46] *Id.* at *5.

[47] *Id.* at *5.

[48] With respect to Capitol One's allegation that IV's asserted patents are invalid, as Capitol One argued in its brief to the Federal Circuit, "the law does not insulate IV's conduct from antitrust scrutiny merely because Capitol One has alleged that the patents are *invalid*. IV's acquisition-and-licensing strategy is unlawful because it produces monopoly power. Patent invalidity makes an antirust problem more, not less, severe, as the Supreme Court recently emphasized in *Actavis*." Brief of Cross Appellants at 61, *Intellectual Ventures I LLC v. Capital One Financial Corp.*, Case No. 2014-1506, -1515, Dkt. No. 39 (Fed. Cir. Oct. 14, 2014) ("Capital One Appellate Br.").

a large collection of copyrighted music, had monopolized the market for the works in its portfolio.[49] As the court explained, "[p]laintiffs' antitrust claims are premised on their underlying allegation that, as a practical matter, they cannot avoid songs in the SESAC repertory…because (1) SESAC [contained important works] and (2) SESAC refuses to disclose the full contents of its repertory."[50]

That second point is crucial, and analogous to the situation that Capital One faced. Plaintiffs needed a SESAC blanket license only because it covered some works that the plaintiffs wished to license, and they were unable to determine which works in the SESAC portfolio they would need to avoid.[51] Capital One also likely wished to continue using any valid IV patents it might practice; but, given IV's concealment of the contents of its portfolio, Capital One was similarly unable to determine whether any particular design change would allow it to avoid infringing IV's patents.

The plaintiff in *SESAC* alleged a relevant market coextensive with the music in SESAC's portfolio, much like Capitol One's alleged relevant market coextensive with the patents in IV's portfolio. SESAC challenged that alleged market on the basis that "musical works are not interchangeable with one another [and] each musical work must be taken as its own market."[52] The *SESAC* court rejected that challenge, observing "SESAC's bid to define the market as at the level of each song would place SESAC's blanket license outside the scope of the antitrust laws."[53]

Putting aside factual differences between the availability of substitutes for a song as compared to the availability of substitutes for a patented technology, *SESAC* is at odds with *Capitol One. Capitol One* expressly rejected an alleged market that was coextensive with the

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[49] *SESAC*, 2011 WL 856266 at *1.

[50] *SESAC*, 2011 WL 856266 at *3. More recently, the court denied SESAC's motion for summary judgment on the plaintiffs' Section 2 claims, ruling that the relevant antitrust market is the "market for television-performance rights to works within SESAC's repertory," *Meredith Corp. v. SESAC*, 1 F. Supp. 3d 180, 218 (S.D.N.Y. 2014), that SESAC has monopoly power in that market (*id.* at 222), and that the plaintiffs sufficiently alleged that SESAC has maintained that power through "overt exclusionary acts." *Id.* at 223.

[51] The Amended Complaint alleged that "SESAC has threatened to withhold access to any part of its repertory and refused to disclose the full contents of its repertory, to impede stations from making independent licensing arrangements." *SESAC*, 1 F. Supp. 3d at 195 (internal citations omitted). Plaintiffs, a collection of local television stations, were also contractually obligated not to alter the programs they broadcast to remove embedded music. Thus, if plaintiffs were to broadcast a program containing a SESAC work, they would need a SESAC license.

[52] *Id.* at 196.

[53] *Id.* at 220. The court noted the inability of SESAC's counsel's during oral argument to answer the question, "[w]ere each song treated as its own market, how could there ever be liability for a [Performing Rights Organization]?" *Id.* Rejecting the notion that the defendant's "behavior with regard to the offer to television stations of its blanket license is an antitrust-free zone," (*id.*) the court ruled that the relevant market was the one alleged by the plaintiff and "is fairly defined as that for performance licenses of the music in SESAC's repertory." *Id.* at 196. The Court articulates three bases for its decision: "*First,* virtually all composers affiliate with only one of the three PROs. *Second,* almost all local stations have licenses form all three PROs. As a practical matter, a station must have such licenses because it is unable to control—or, sometimes, even identify—what music is contained within third party programs. *Third*, local stations have not responded to SESAC's price increases by replacing SESAC licenses with alternative licenses. Together, this evidence supplies an ample factual basis on which the finder of fact could conclude that the relevant market is bounded, or defined, by SESAC's repertory. *See Eastman Kodak*, 504 U.S. 82 ('[t]he proper market definition . . .can be determined only after a factual inquiry into the commercial realities faced by consumers.')." *Id.* at 218.

portfolio and did not include "all, or even any, of the available substitutes for the technologies included within that proposed market."[54] The court ruled that Capital One's alleged market was not cognizable because: "the actual technologies included within the proposed market … appear nearly irrelevant, since it is not the substantive, commercial usefulness or the merits of the technology that defines the market; but simply the patents in that market used to threaten Capital One, which consist entirely of IV's patent portfolio."[55]

Capitol One argued in support of its alleged market definition that it properly identified the group of technologies that IV's concealment and threats implicated. Capital One's approach is consistent with its "business need"—not merely a "business need to avoid future litigation"[56] as the court suggests—but the business need to license only the valid, infringed patents that might be included in the 3,500 undisclosed patents with which it had been threatened. Given that Capital One had alleged that IV was concealing the contents of its portfolio, Capital One understandably did not identify the precise scope of the patents it was locked-in to licensing.[57]

In the circumstances, Capital One had no incentive to design around any particular IV patent; doing so would have had no appreciable effect on its bargaining position with IV given that thousands of patents would remain at issue (according to IV, at least). Capital One also could not be sure whether its new design would actually escape IV's portfolio, since it did not know which patents it was trying to design around. The market definition alleged by Capital One is appealing because it tracks the defendants' understanding of its own situation, and ties Capital One's "lock-in" to one of the economically inefficient elements of IV's conduct: IV's secrecy.

An alternative approach to market definition that would respond to the court's criticism and more neatly fit into existing antitrust doctrines is to define individual markets for the technologies covered by the asserted patents.[58] Under this approach, whether IV holds market power in a particular technology market is determined by whether there are reasonable

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[54] *Capital One*, 2013 WL 6682981 at *5. On appeal, Capital One challenges the district court's apparent conclusion that "a properly defined market must exclusively comprise substitutes" (Capital One Appellate Br. at 67), arguing that, "binding Supreme Court precedent recognizes cluster markets comprised of 'different'—that is, non-substitutable—products when purchasers consider them together. *See Grinnell*, 384 U.S. at 572 ('We see no barrier to combining in a single market a number of different products or services where that combination reflects commercial realities.')…." *Id.*

[55] *Capital One*, 2013 WL 6682981 at *5.

[56] The court reasoned that, given Capital One's challenge to the validity of IV's patents, the only "business necessity" Capital One could allege was "the business need to avoid future litigation." *Id.* at *5. Presumably, Capital One did not seek to avoid such litigation purely for the sake of "avoiding" litigation costs. Obviously such litigation is disruptive to its business, could create disincentives to innovation, and creates uncertainty with respect to exposure to IV's intellectual property and the risk of damages.

[57] As alleged in the First Amended Counterclaims, IV refused to tell Capital One the scope of the secret patent thicket it faced. First Amended Counterclaims at ¶ 63, *Intellectual Ventures I LLC v. Capital One Financial Corp.*, No. 13-cv-740, 2013 WL 6046992 (E.D. Va. Oct. 14, 2013) ("Am. Counterclaims").

[58] *See, e.g., Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962) ("The outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it.").

technological substitutes for the patented technology IV asserts against Capital One.[59] Once specific technology markets including each of the asserted patents are defined, the next question is whether market power can be established in any of them. That inquiry in individual technology markets requires an assessment of the nature and extent of lock-in, but it would seem reasonable to infer here, as the Court affirmed in *Kodak*, that IV has market power to raise prices and drive out competition.[60]

Capital One may, in theory, be able to turn to a substitute technology for an individual technology covered by a patent that IV asserts, but it has no practical ability to do so because IV is threatening Capital One with "a never-ending series of costly and disruptive"[61] lawsuits, including unknowable claims on the undisclosed related patents. Accordingly, IV has turned so-called "patent monopolies" into economic monopolies in relevant technology markets (i.e., technologies that compete to perform a given function)—not through the usual accumulation of multiple competing patented technologies but, rather, by making it uneconomic as a practical matter for Capital One to switch to alternative technologies.

The question will be whether power in a relevant market for technology covered by an individual asserted patent can be established in circumstances where the clandestine acquisition and assertion of patents in *other related* technology markets can be shown to give the patentee monopoly power—the ability to extract supra-competitive royalties—in the candidate technology market. Arguably, IV obtained monopoly power in individual technology markets by acquiring related patents that broadened the secret portfolio with which it could threaten to evict Capital One, or at least collect damages.[62]

Defining individual technology markets covered by IV's asserted patents is arguably more consistent with antitrust doctrine than Capital One's attempt to define a market consisting of multiple complementary technologies. But while those individual technology markets are much simpler to define using traditional antitrust market analysis, this approach admittedly does not correlate with the impact of IV's alleged concealment and threats, which arises from the full portfolio of technologies. The disconnect between the impact of a portfolio assertion on an implementer like Capital One—which faces a threat to its entire product rather than to individual technology components—and the most natural and legally accepted antitrust market definition exercise makes it challenging simultaneously to define a cognizable market and demonstrate power within it.

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[59] In the brief Capitol One filed in support of its appeal, it argued that a significant anticompetitive effect from IV's conduct is that it "prevented licensees from evaluating potential marketplace alternatives." Capital One Appellate Br. at p. 60.

[60] *Eastman Kodak Co. v. Image Tech Serv. Inc.*, 504 U.S. 451, 476-478 (1992).

[61] Answer to Complaint, Eighth Defense, *Intellectual Ventures I LLC v Capital One Financial Corp*., No. 13-cv-740, 2013 WL 6046992 (E.D. Va. Oct. 14, 2013).

[62] The court criticizes Capital One for failing to specify "at what point IV's enforcement of multiple patents becomes unlawful monopoly power." *Capital One*, 2013 WL 6682981 at *7. It may not be necessary to prove when acquiring the *nth* patent tipped the balance because Capital One is not complaining simply about the acquisition of complementary patents—but rather about IV's hold-up, its threat of asserting its portfolio of secret patents in serial litigation.

2. Monopoly Power

Capital One alleged monopoly power based on direct evidence of "supra-competitive prices and restricted output."[63] The court rejected these allegations because they lacked "any specific license fees" demanded or paid by other banks.[64] Capital One attempted to address this by alleging that non-banking companies paid IV hundreds of millions of dollars that "bear no commercial or economic relation to the real financial worth of the individual licensed patents, but reflect portfolio monopoly overcharges."[65] The court found that allegation insufficient. Not only were those fees paid in relation to a different market but, given the well-established case law refusing to limit the royalties that a patentee can extract for a lawful patent, the court rejected the argument that threats of "endless litigation" rendered those royalties unlawful.[66]

Although one cannot challenge the court's ruling that the only limit on a patentee's royalties is the licensee's willingness to pay,[67] that observation misses the point. Although supracompetitive prices, without more, may not be unlawful,[68] the effect of IV's secretive accumulation of related patents is to artificially raise the amount that a licensee is willing to pay through fear, uncertainty, and an inability to design around the hidden portion of the portfolio. As Capital One alleged:

> Secrecy, misdirection, and obfuscation are hallmarks of Intellectual Ventures' business strategy, which uses a labyrinthine network of some 2,000 shell companies for at least two anticompetitive purposes. First, it employs those shell companies to engage in "submarine" hold-up. The shell companies allow Intellectual Ventures to conceal its patent acquisitions so that targets have no idea that it is building walls of patents around their businesses. Second, the shell companies ensure that, when Intellectual Ventures does launch an attack, its targets cannot assess or value its portfolio, and thus among other things cannot determine whether they could avoid Intellectual Ventures' infringement claims by redesigning their accused products or processes. Both of these effects amplify the magnitude and impact of the threat that IV imposes on its victims.[69]

Absent any pro-competitive reason to conceal the contents of a portfolio—and there is no such apparent justification for artificially increasing information costs—such manipulation of a licensee's willingness to pay raises concern. Moreover, because the willingness to pay dictates the

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[63] *Capital One*, 2013 WL 6682981 at *6.

[64] *Id*.

[65] Am. Counterclaims, ¶ 70.

[66] *Capital One*, 2013 WL 6682981 at *6.

[67] *Brulotte v. Thys Co*., 379 U.S. 29, 33 (1964) (a patent "empowers the owner to extract royalties as high as he can negotiate with the leverage of that monopoly"). The court also cited *F.T.C. v. Actavis Inc*., 133 S. Ct. 2223, 2231 (2013) ("[A] valid patent excludes all except its owner from the use of the patented process or product. And that exclusion may permit the patent owner to charge a higher-than-competitive price for the patented product."). *Capital One*, 2013 WL 6682981 at *6. This reference to *Actavis* is uninformative to the extent that there is no definition of what a competitive price is (or how it would be established) other than by basing it on the *ex ante* benchmark.

[68] *See Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) ("To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct*.")

[69] Am. Counterclaims, ¶ 63.

theoretical value of the license,[70] evidence that it was manipulated is direct evidence of power over prices.

With respect to our proposed alternative market definition, IV has turned so-called "patent monopolies" in individual technology markets into economic monopolies by eliminating the feasibility of Capitol One substituting a competing technology to perform a given function. Although there is no technical or contractual barrier preventing Capital One from redesigning its products to avoid infringement, there is a significant economic one. By concealing the scope of its portfolio, IV requires Capital One to attempt to design around an undefined set of patents, which is virtually impossible. Given that any redesign will be certain to avoid only the tiny fraction of IV's portfolio that has been disclosed, it will have virtually no impact on negotiations to license thousands of remaining patents, and would be irrational to undertake. This harms potential licensors who own technologies that compete with IV's patents in the individual technology markets by eliminating their ability to compete on price with IV.

3. Anticompetitive Conduct and Antitrust Injury

Capital One alleged that IV engaged in several types of misconduct: patent aggregation, sham litigation, and threatened serial litigation. The court first rejected these allegations on the collective ground that Capital One was not a competitor of IV, and therefore had not alleged any foreclosure or improper competitive advantage.[71] This analysis misses the point that IV was using its portfolio of secret patents to distort Capital One's willingness to pay for that portfolio.

Under the alternative market definition we suggest, IV's conduct made it uneconomic for Capital One to switch to alternatives to IV's technologies in relevant technology markets, and thereby illegally excluded those alternative technologies. As IV's potential licensee, Capital One has suffered antitrust injury because its costs of licensing technologies in relevant technology markets has increased as a result of IV's exclusionary conduct.

The court next addressed the three types of alleged misconduct individually, and found none sufficient to state a claim. With respect to patent aggregation, the court noted that there was no particular patent acquisition that was challenged; only the overall size of the portfolio was attacked. Absent some allegation that a particular acquisition was unlawful, the court rejected this theory.[72] That reading of Capital One's allegations seems cramped. Capital One alleged not simply that these patents were acquired, but also that they were collectively used to threaten its business. Thus, it is not simply that IV's portfolio one day reached a maximum permitted size, but rather than the collective strategy of secretly accumulating thousands of patents and then serially asserting them without disclosure gave rise to improper hold-up power.

With respect to the sham litigation theory, the court held that "Capital One does not allege any specific litigation history to support that claim or identify any particular patents IV has attempted or threatened to enforce that have expired, been cancelled or adjudicated to be invalid."[73] Thus, the *Noerr-Pennington* doctrine immunized IV's conduct in asserting its patents.

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[70] *See, e.g.*, Scott Morton & Shapiro, *Strategic Patent Acquisitions* 79 ANTITRUST L.J. at 471.
[71] *Capital One*, 2013 WL 6682981 at *7.
[72] *Id.*
[73] *Id.*

Although it seems unfair to criticize Capital One for being unable to identify the *undisclosed* IV patents with which it was being threatened, Capitol One surely could have identified the patents asserted by IV in litigation if there were a basis on which to allege that those patent infringement claims were objectively and subjectively baseless. Of course, that determination may not be possible until a later adjudication of the merits of the patent infringement claims.

As to the allegations of serial litigation, the court concluded that Capital One was merely complaining about IV's resources and ability to enforce patent rights that might be uneconomical to assert if held by many different owners.[74] According to the court, there was nothing improper about that capability or the threat to use it. However, the court did hold open the possibility that repeated, failed efforts to enforce IV's portfolio might give rise to tort liability or sanctions (that would not turn on market power in a relevant market).[75]

As to antitrust injury, Capital One alleged that it was injured by being forced to operate under the threat of hold-up. In particular, that threat limited its design choices, reduced its investment in innovation, and cost time and money for a defense. The court did not reach this issue given its rulings related to market definition, monopoly power, and anticompetitive conduct.[76] However, the costs and uncertainties IV has imposed on Capital One's business through IV's efforts to extract hold-up value for its portfolio does appear to be "injury of the type the antitrust laws were intended to prevent and that flows from that which makes the defendants' acts unlawful."[77]

D. Clayton Act Section 7

IV also challenged Capital One's Section 7 claim on several grounds. It raised the same objections to Capital One's alleged market definition as in the Sherman Act context, and further objected to Capital One's failure to identify specific patent acquisitions that violated Section 7. The court rejected Capital One's theory on the ground that the alleged anticompetitive effects arose only when the patents were enforced as a portfolio, and not at the time of the acquisition.[78] The court also noted that Capital One's Section 7 claim was flawed for failure to allege that the acquisition lessened competition by the exclusion or elimination of a rival. IV might have violated Section 7 "if, for example [it] had acquired all substitute or competing technologies."[79] However, because Capital One was unable to identify which patents were implicated, it could not plausibly allege that the acquisition of those patents lessened competition.

1. Timing of Impact

The court concluded that, in the patent context, Section 7 addresses only those situations in which the acquisition of a patent substantially lessens competition, and not situations in which anticompetitive effects arise at some point after the acquisition, relying on *SCM Corp.*[80] ("'Where

[74] *Id.*
[75] *Id.* at *8.
[76] *Capital One*, 2013 WL 6682981 at n.3.
[77] *Atlantic Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 334 (1990).
[78] *Capital One*, 2013 WL 6682981 at *9 (discussing *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1210 (2d Cir. 1981)).
[79] *Id.*
[80] *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1211-12 (2d Cir. 1981).

a corporation's acquisition of a patent is not violative of section 7 … its subsequent holding of the patent cannot later be deemed violative of this section.'") and *Brown Shoe*[81] (noting that the purpose of Section 7 of the Clayton Act was to arrest acquisitions with anticompetitive effects in their "incipiency"). It seems too simplistic to dismiss the claim simply because the anticompetitive effects complained of arose subsequent to the acquisitions, when the challenged conduct was possible only as a result of those acquisitions.

There is a reasonable argument that patent acquisitions should not be distinguished from other acquisitions with regard to whether the term "acquisition" in Section 7 relates to both "acquiring" and "retaining" an asset. The Second Circuit's *SCM Corp.* decision[82] creates an exception to the Supreme Court ruling in *DuPont*[83] (legality of acquisition under Section 7 determined at "any time when the acquisition threatens to ripen into a prohibited effect."). But there may not always be a basis for treating intellectual property differently from other assets in this respect. And there is certainly no basis to do so in this case. Here, the aggregation of a huge portfolio of undisclosed patents is being used to deter and frustrate challenges to individual patents within that portfolio, which is contrary to the public's interest in seeing such challenges.[84]

On the facts, *SCM Corp*. is also distinguishable. In *SCM Corp.,* the patent acquisition was alleged to reduce competition in a product market that did not come into existence at all for years afterwards, and plaintiffs alleged a refusal to license. In contrast, Capital One's claims are not about a monopoly developing over time or a refusal to license. Instead, they relate to the secret aggregation of patents that read on a target's end product to immediately enhance IV's ability to threaten that target with a secret portfolio of patents covering the target's product. Although the hold-up royalties are not extracted or demanded until *after* the acquisition, that is no different than observing that the price increases in a physical goods market are only raised after an anticompetitive merger is consummated—the market power permitting such price increases stems from the acquisition. Challenges to mergers involving physical goods are routinely premised on predictions about *future* anticompetitive effects,[85] and there is no reasoned basis to apply a different rule for these transactions involving intellectual property.

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[81] *Brown Shoe Co. v. United States*, 370 U.S. 294, 317-18 (1962).

[82] 645 F.2d 1195, 1212 ("Where a company has acquired patents lawfully, it must be entitled to hold them free from the threat of antitrust liability for the seventeen years that the patent laws provide. To hold otherwise would unduly trespass upon the policies that underlie the patent law system.").

[83] *United States v. E.I. DuPont de Nemours & Co.*, 353 U.S. 586, 597 (1957).

[84] *Lear, Inc. v. Adkins*, 395 U.S. 653, 656 (1969) (noting "the strong federal policy favoring free competition in ideas which do not merit patent protection").

[85] *Brown Shoe Co. v. United States*, 370 U.S. 294, 317-18, 323 (1962) (purpose of § 7 was to halt anticompetitive mergers that *may be* anticompetitive in their incipiency); U.S. Department of Justice and U.S. Federal Trade Commission, Horizontal Merger Guidelines at p. 1 (2010) ("Horizontal Merger Guidelines") ("Most merger analysis is necessarily predictive, requiring an assessment of what will likely happen if a merger proceeds as compared to what will likely happen if it does not. Given this inherent need for prediction, these Guidelines reflect the congressional intent that merger enforcement should interdict competitive problems in their incipiency and that certainty about anticompetitive effect is seldom possible and not required for a merger to be illegal.").

2. Foreclosure of Rivals

Here, the wrinkle is that IV accumulated economic market power by aggregating patent monopolies over related (but not substitutable)[86] assets. Typically, Section 7 challenges involve situations where transactions are likely to lead to higher prices or lower quality by eliminating or (for vertical transactions) impairing rivalry.[87] Here, the transaction does not—in and of itself—exclude or impair rivalries in individual technology markets. As we discuss above, however, IV's practice of secretly amassing and then serially asserting patents without disclosure *does* lead to higher prices in technology markets by making it economically infeasible for implementers to design around IV's patents and use alternative technologies. And by eliminating any incentive to design around specific IV patents, IV's strategy does foreclose competing technology licensors.

Despite the lack of a perfect fit with traditional Section 7 jurisprudence, we believe that the law is sufficiently flexible to capture this type of misconduct. This flexibility is illustrated by the older conglomerate merger cases such as *Clorox*.[88] There, the Court condemned Procter and Gamble's acquisition of Clorox essentially because it would confer an unfair promotional advantage on Clorox to the detriment of smaller rivals.[89]

While the *Clorox* case may not survive scrutiny today, and the category of "conglomerate mergers" is not reflected in current case law or agency guidance, *Clorox* and its progeny do consider the potential competitive significance of aggregating complements when such aggregation will have an effect on rivalries. Notably, Justice Harlan observes in his concurring opinion in *Clorox* that, "[i]t is clear enough that Congress desired that conglomerate and product-extension mergers be brought under Section 7 scrutiny, but well versed economists have argued that such scrutiny can never lead to a valid finding of illegality."[90] But where sound economic analysis can identify anticompetitive effects on competing products or technologies stemming from the aggregation of complements, it is worth revisiting to properly capture such conduct within Section 7.

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[86] The analysis is much simpler if IV acquired competing patents. Given the secrecy surrounding IV's portfolio and the number of patents involved, there likely are substitute patents included in the portfolio. That scenario is much more naturally addressed through existing Section 2 and Section 7 jurisprudence as a horizontal merger, and therefore is not addressed here.

[87] Horizontal Merger Guidelines at 2 ("A merger can enhance market power simply by eliminating competition between the merging parties."); *Brown Shoe Co. v. United States*, 370 U.S. 294, 323-24 (1962) ("The primary vice of a vertical merger or other arrangement tying a customer to a supplier is that, by foreclosing the competitors of either party from a segment of the market otherwise open to them, the arrangement may act as a clog on competition, which deprive[s] . . . rivals of a fair opportunity to compete." (internal quotation marks and citations omitted; alterations in original)).

[88] *FTC v. Procter and Gamble Co.,* 386 U.S. 568 (1967).

[89] Areeda observes that, "[w]hile the previously independent Clorox may also have had sufficient resources for such purposes, the Court intuitively supposed that Procter could more obviously outlast a bleach rival than could Clorox." Areeda goes on to note, "even so, one must distinguish between rational promotions and those that cannot be explained except as an effort to destroy a rival. The characteristic of the bleach market probably would not make predation possible." AREEDA & HOVENKAMP, ANTITRUST LAW, section 1146, p. 210.

[90] *Clorox*, 386 U.S. at 587.

More recently, the agencies' merger analysis has considered not only on the ability but also the incentive of the acquiring entity to raise prices.[91] For example, Commissioner Rosch expressed concern about the sale of a patent on the only then-existing treatment for a heart condition in premature babies, i.e., the transfer of a monopoly. His concerns related to changes in the incentives of the new owner. He explained that:

> the sale of Indocin to Ovation had the effect of eliminating the reputational constraints on Merck that had existed prior to the sale… . [A]fter the transaction, Ovation began charging roughly 1300 percent more…. [T]here is reason to believe that Merck's sale of Indocin to Ovation had the effect of enabling Ovation to exercise monopoly power in its pricing of Indocin, which Merck could not profitably do prior to the transaction.[92]

Similarly, the DOJ analyzed Google's acquisition of Motorola's patents with reference to the individual companies' licensing practices. The DOJ concluded that Motorola was already aggressively seeking to enforce its standard essential patents, and therefore there could be no merger-specific competitive concerns if Google were to continue the same "market dynamics."[93] These reputational concerns are clearly distinct from the scope of the patent rights, but just as clearly can have a significant impact on actual royalty rates.

We do not believe that an adventure into behavioral economics is necessary to capture troll activity under the antitrust laws, but the complementary banking system patents amassed by IV can be viewed in this same rubric. Although individual owners of the patents may not have had the incentive to assert those patents or conceal which patents they were asserting, IV clearly did. Indeed, this dynamic undermines one of the purported economic benefits of patent aggregation—the ability of PAEs to create a liquid market for the sale of patents that smaller inventors are unable to monetize, thereby enabling inventors to obtain a return on their research

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[91] *See, e.g.*, Horizontal Merger Guidelines at 2 ("mergers should not be permitted to create, enhance, or entrench market power ***or to facilitate its exercise***. For simplicity of exposition, these Guidelines generally refer to all of these effects as enhancing market power. A merger enhances market power if it is likely to encourage one or more firms to raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints ***or incentives***. In evaluating how a merger will likely change a firm's behavior, the Agencies focus primarily on how the merger affects conduct that would be most profitable for the firm."). *See also* 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. (Feb. 13, 2012) ("the critical issue is whether the patent holder has the incentive and ability to hold up its competitors…[t]he division's analysis focused on how the proposed transactions might change that incentive and ability to do so.").

[92] Concurring Statement of Commissioner J. Thomas Rosch, *FTC v. Ovation Pharmaceuticals, Inc.*, FTC No. 081-0156 (Dec. 16, 2008) *available at* http://www.ftc.gov/public-statements/2008/12/concurring-statement-commissioner-j-thomas-rosch-federal-trade-commission.

[93] 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. (Feb. 13, 2012) ("The specific transactions at issue, however, are not likely to substantially lessen competition. The evidence shows that Motorola Mobility has had a long and aggressive history of seeking to capitalize on its intellectual property and has been engaged in extended disputes with Apple, Microsoft and others. As Google's acquisition of Motorola Mobility is unlikely to materially alter that policy, the division concluded that transferring ownership of the patents would not substantially alter current market dynamics.").

efforts and stimulating additional innovation. IV's business strategy to acquire thousands of patents that it refuses to identify clearly changes the "market dynamics" in ways that acquisition by other entities need not, with significant impacts on competition.

Finally, a target licensee such as Capital One should have standing to challenge the secret acquisition of the various patents with which it is being threatened. It is hurt by the anticompetitive aspects of a troll's conduct in the same way that a traditional customer might be hurt by the merger of its suppliers.[94]

E. Patent Misuse

IV sought to strike Capital One's patent misuse defense on the ground that it had not expanded the physical or temporal scope of its patents, and was entitled to assert its patents against potential infringers. The court agreed, observing that misuse is a "narrow doctrine" that applies only when the patentee has increased the physical or temporal scope of the patent at issue.[95] Because Capital One had alleged increased enforcement rather than tying or post-expiration royalties, its misuse defense failed.

The court correctly observed that patent misuse is a narrow doctrine that applies only to the physical or temporal expansion of the patents in suit.[96] However, at least one court recently rejected a motion by IV for judgment on the pleadings with respect to a patent misuse defense. In *Symantec Corp.*[97] Symantec argued that:

1. IV engages in patent misuse by package licensing—tying the "wanted" patents-in-suit with a large and undisclosed number of "unwanted" patents;
2. Symantec is forced to license invalid patents, resulting in an economic disincentive to challenge validity and thereby impermissibly broadening the physical or temporal scope of the patent grant; and
3. IV has illegally monopolized the relevant markets for patent portfolios that are indispensable for making, selling, and using internet security and other related computer functions by aggregating a collection of patents for which no substitutes exist.[98]

The court held that the rule of reason applied to the affirmative defense of patent misuse by package licensing and declined to rule on an incomplete factual record. The court similarly held that the second and third ground for the patent misuse defense—collecting royalties from invalid patents and monopolization—also depended on disputed issues of fact.[99] Importantly, the court did not reject these theories as a matter of law.

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[94] *See, e.g.*, *Glen Holly Entertainment v. Tektronix Inc.*, 343 F.3d 1000, 1010-11 (9th Cir. 2003) (allegations that plaintiff was a customer (as well as a competitor in a slightly different market) sufficient to establish antitrust injury, which could include higher prices, less innovative products, or artificial restrictions on consumer choice).

[95] *Capital One*, 2013 WL 6682981 at *9.

[96] *Princo Corp. v. International Trade Com'n*, 616 F.3d 1318, 1328-29 (Fed. Cir. 2010) (*en banc*) (explaining that "we have characterized patent misuse as the patentee's act of impermissibly broaden[ing] the physical or temporal scope of the patent grant with anticompetitive effect," (internal quotation marks omitted), and noting that the doctrine is "narrow.").

[97] *Intellectual Ventures I LLC v. Symantec Corp.* No. 13-cv-440, 2014 WL 4773954 (D. Del. Sept. 24, 2014).

[98] *Id.* at *3.

[99] *Id.* at *3-4.

Even if the defense of patent misuse as presently construed by the courts is too narrow to apply to IV's conduct, there are strong arguments for expanding the doctrine to cover these circumstances. In particular, the attempt to force licensees to take a license to undisclosed patents on the basis of the volume of patents in the portfolio strongly suggests that the portfolio as a whole is being asserted more broadly than is justified by the individual patents in it. If that is the case, then the physical scope of the portfolio is being expanded through the collection of royalties on non-infringing products. Similarly, it is impossible to know whether the undisclosed patents are being asserted post-expiration. Thus, while a new category of patent misuse may be required to address a PAE's refusal to identify its patents during licensing negotiations, such an extension would fit easily within the overall purpose of the defense.

III. CONCLUSION

The heart of the problem with Capitol One's claims appears to be that it asserted those claims under Section 2 and Section 7 without alleging the exclusion of a rival or impairment of rivalries.[100] Alleging a market definition that was coextensive with IV's portfolio—rather than alleging individual markets for the technologies covered by IV's patents—took the focus away from the alternative technologies in each relevant market that were no longer feasible and instead featured the group of technologies that IV's concealment and threats implicated.

IV was able to hold-up Capital One by threatening to assert an undisclosed number of secret patents that read on the same Capital One end product, but this does not mean that the alleged conduct did not also exclude competitive technologies to the asserted patents. Secrecy and obfuscation destroys the incentive to design around trivial patents, and thus eliminates substitutes for those patents as economically viable options. Moreover, hold-up is not a mere redistribution of rents from the implementer of the asserted patents to the PAE: as we noted, it may have harmful effects on firms' entry, product development, and innovation incentives.

Although there does not appear to be a "silver bullet" in the arsenal of antitrust law to address troll conduct such as was presented by the *Capital One* case, there are strong arguments for applying Sherman Act, Section 2 and/or Clayton Act, Section 7 to address the anticompetitive effects that result. The tactics employed by trolls require innovative application of legal doctrine, and existing jurisprudence provides a framework to curb the abuses.

[100] A common definition of exclusionary conduct is "acts that: (1) are reasonably capable of creating, enlarging, or prolonging monopoly power by impairing the opportunities of rivals, and (2) that either (2a) do not benefit consumers at all or (2b) are unnecessary for the particular consumer benefits that the acts produce, or (2c) produce harms disproportionate to the resulting benefits." AREEDA & HOVENKAMP, FUNDAMENTALS OF ANTITRUST LAW, (4th ed. 2012), § 6.04k (emphasis added). Similarly, under Section 7 of the Clayton Act, *Brown Shoe* focuses on transactions that create a "clog on competition" which "deprives … ***rivals*** of a fair opportunity to compete. *Brown Shoe*, 370 U.S. at 323-24 (emphasis added).