

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, D.C.**

**In the Matter of**

**CERTAIN 3G MOBILE HANDSETS  
AND COMPONENTS THEREOF**

**Inv. No. 337-TA-613  
(REMAND)**

**REPLY SUBMISSION ON THE PUBLIC INTEREST  
OF FEDERAL TRADE COMMISSIONERS  
MAUREEN K. OHLHAUSEN AND JOSHUA D. WRIGHT**

## I. INTRODUCTION

As Commissioners of the United States Federal Trade Commission, we submit this statement in reply to the written statements submitted in response to the United States International Trade Commission's (ITC's) Notice of Request for Written Submissions in Investigation No. 337-TA-613 (Remand).<sup>1</sup> In particular, this statement addresses whether the ITC should presume patent holdup is prevalent—as some commentators have proposed—when considering whether to preclude an exclusion order on public interest grounds in a matter involving standard-essential patents (SEPs) encumbered by a commitment to license on fair, reasonable, and non-discriminatory (FRAND) terms. We recommend against any such presumption and instead support Administrative Law Judge (ALJ) Essex's evidence-based approach to the public interest inquiry.

The ITC should not begin its analysis by initially imposing upon the SEP holder the burden of proving that the accused infringer is unwilling or unable to take a license on FRAND terms. This approach presumes patent holdup is frequent and results in significant negative consequences for competition and innovation. Such a sharp departure from the current state of the law requires substantiation in the form of robust and reliable empirical evidence. However, the data simply do not support such a presumption. Beyond lack of empirical support, the proposed approach is contrary to sound economic analysis, would be contrary to the United States Trade Representative's (USTR's) directive in the *Samsung* matter, and would create a conflict between the standard imposed by the ITC and that required by federal courts. It would also threaten to deter participation in standard setting by, among other things, encouraging

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<sup>1</sup> The views reflected in this statement are our own and do not necessarily represent the views of the Commission or any other Commissioners. We take no position on the facts of this investigation.

reverse holdup and holdout, thereby depriving consumers of the substantial procompetitive benefits of standardized technology.<sup>2</sup>

There is no empirical evidence to support the theory that patent holdup is a common problem in real world markets. The theory that patent holdup is prevalent predicts that the threat of injunction leads to higher prices, reduced output, and lower rates of innovation. These are all testable implications. Contrary to these predictions, the empirical evidence is not consistent with the theory that patent holdup has resulted in a reduction of competition. To the contrary, wireless prices have dropped relative to the overall consumer price index (CPI) since 2005, output has grown exponentially, features and innovation continue at a rapid pace, and competition between mobile device manufacturers has been highly robust with meaningful entry over time.

Recognizing the theoretical nature of holdup concerns, federal courts, including the United States Court of Appeals for the Federal Circuit, have held that concerns about holdup must be proven, and that accused infringers must bear the burden of demonstrating that the patent holder used injunctive relief to gain undue leverage and demand supra-competitive royalties. Likewise, in an August 3, 2013 disapproval letter in the *Samsung* matter, the USTR instructed the ITC to “make explicit findings” to the extent possible on the presence or absence of patent holdup or reverse holdup in each particular case when conducting the public interest inquiry. Any proposal to presume the existence of holdup contradicts the decisions of federal courts and the USTR’s directive.

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<sup>2</sup> Holdup requires lock-in, and standard-implementing companies with asset-specific investments can be locked in to the technologies defining the standard. On the other hand, innovators that are contributing to a standard-setting organization (SSO) can also be locked-in if their technologies have a market only within the standard. Thus, incentives to engage in holdup run in both directions. There is also the possibility of holdout. While reverse holdup refers to the situation when licensees use their leverage to obtain rates and terms below FRAND, holdout refers to licensees either refusing to take a FRAND license or delaying doing so.

## II. EMPIRICAL EVIDENCE SUGGESTS NO SYSTEMIC PROBLEM WITH HOLDUP

Antitrust theories of patent holdup contemplate that a patentee participating in the standard-setting process can, once the standard is adopted by an SSO, “hold up” potential licensees by exploiting lock-in (investment-specific investments) to demand a higher royalty rate than would have prevailed in a competitive process. While serious and important scholarly work exists exploring the theoretical conditions under which patent holdup might occur, this literature merely demonstrates the *possibility* that an injunction (or the threat of an injunction) against infringement of a patent *can* be profitable and potentially anticompetitive. This same literature has long recognized, in both the intellectual property rights and real property context, the threat of reverse holdup.

It is important to distinguish the hypotheses generated in the theoretical literature on patent holdup from empirical evidence that would substantiate those hypotheses. Our own assessment is that the existing empirical evidence is not consistent with the view that holdup is a prevalent or systemic problem that is causing harm to consumers.<sup>3</sup> To be clear, the evidence is entirely consistent with the possibility of anticompetitive patent holdup in a given instance. But the evidence required to support the proposed approach—a presumption that the mere threat of

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<sup>3</sup> See Joshua D. Wright & Douglas H. Ginsburg, *Patent Assertion Entities and Antitrust: A Competition Cure for a Litigation Disease*, 79 ANTITRUST L.J. 501, 509 (2014) (“The view that contractual opportunism alone gives rise to an antitrust problem rather than a contract problem is in tension with substantial economic literature on the subject.”); Greg Sidak, *The Antitrust Division’s Devaluation of Standard-Essential Patents*, 104 GEORGETOWN L.J. ONLINE 48, 61 (2015) (collecting studies at n.49) (“By early 2015, more than two dozen economists and lawyers had disapproved or disputed the numerous assumptions and predictions of the patent holdup and royalty stacking conjectures.”), available at <https://www.criterioneconomics.com/docs/antitrust-divisions-devaluation-of-standard-essential-patents.pdf> [hereinafter Sidak]; ANNE LAYNE-FARRAR, PATENT HOLDUP AND ROYALTY STACKING THEORY AND EVIDENCE: WHERE DO WE STAND AFTER 15 YEARS OF HISTORY? (Dec. 2014), available at <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD%282014%2984&doclanguage=en> (surveying the economic literature and concluding that the empirical studies conducted thus far have not shown that holdup is a common problem).

injunction by an SEP holder is sufficient to shift the burden of proof, essentially rendering the exercise of intellectual property rights inherently suspect—requires probability not possibility of higher prices, reduced output, and lower rates of innovation. To the contrary, evidence from the smartphone market indicates output has grown exponentially, while market concentration has fallen, and wireless service prices have dropped relative to the overall CPI.<sup>4</sup> More broadly, SEP-reliant industries in the United States have the fastest price declines.<sup>5</sup> A recent Boston Consulting Group study found that globally the cost per megabyte of data declined 99% from 2005 to 2013 (demonstrating both innovation to make data transmission more cost efficient as well as the healthy state of competition); the dollar per megabyte fell 95% in the transition from 2G to 3G, and 67% in the transition from 3G to 4G; and the global average selling prices for smartphones decreased 23% from 2007 through 2014, while prices for the lowest-end phones fell 63% over the same period.<sup>6</sup>

Economic analysis provides the basis upon which to understand the apparent disconnect between holdup theory and the existing evidence. As economic theory would predict, patent holders and those seeking to license and implement patented technologies seek to contract to minimize the probability of holdup. Several market mechanisms are available to transactors to

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<sup>4</sup> According to data from Gartner, worldwide smartphone sales to end-users has increased over 900% between 2007 to 2014, and 320% between 2010 to 2014. Market concentration in smartphones, as measured by HHIs, went from highly concentrated in 2007, as defined by the FTC/DOJ Horizontal Merger Guidelines, to unconcentrated by the end of 2012. See Keith Mallinson, *Theories of harm with SEP licensing do not stack up*, IP FINANCE BLOG (May 24, 2013), available at <http://ipfinance.blogspot.com/2013/05/theories-of-harm-with-sep-licensing-do.html>. According to the Bureau of Labor Statistics, the ratio of the CPI for wireless telephone services to the overall CPI has dropped 34% from 2007 to 2014.

<sup>5</sup> Alexander Galetovic, Stephen Haber, & Ross Levine, *An Empirical Examination of Patent Hold-Up* (Nat'l Bureau of Econ. Research, Working Paper No. 21090, Apr. 2015), available at <http://www.nber.org/papers/w21090.pdf>.

<sup>6</sup> JULIO BEZERRA ET AL., THE MOBILE REVOLUTION: HOW MOBILE TECHNOLOGIES DRIVE A TRILLION DOLLAR IMPACT 3, 9 (The Boston Consulting Group Jan. 15, 2015), available at [https://www.bcgperspectives.com/content/articles/telecommunications\\_technology\\_business\\_transformation\\_mobile\\_revolution/#chapter1](https://www.bcgperspectives.com/content/articles/telecommunications_technology_business_transformation_mobile_revolution/#chapter1).

mitigate the incidence and likelihood of patent holdup. This is not surprising. The original economic literature upon which the patent holdup theories are based was focused upon the various ways that market actors mitigate the inefficiencies associated with opportunism in the real property setting by using reputation, contracts, and institutions.<sup>7</sup> In the patent context, for example, reputational and business costs may deter repeat players from engaging in holdup and “patent holders that have broad cross-licensing agreements with the SEP-owner may be protected from hold-up.”<sup>8</sup> In addition, patent holders often enjoy a first-mover advantage if their technology is adopted as the standard. “As a result, patent holders who manufacture products using the standardized technology ‘may find it more profitable to offer attractive licensing terms in order to promote the adoption of the product using the standard, increasing demand for its product rather than extracting high royalties.’”<sup>9</sup>

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<sup>7</sup>Benjamin Klein, *Why Hold-Ups Occur: The Self-Enforcing Range of Contractual Relationships*, 34 *ECON. INQUIRY* 444, 449-50 (1996); Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriate Rents, and Competitive Contracting Process*, 21 *J.L. & ECON.* 297, 303-07 (1978); OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* 26-30 (New York: Free Press 1975); *see also* Joshua D. Wright, Commissioner, Fed. Trade Comm’n, “SSOs, FRAND, and Antitrust: Lessons Learned from the Economics of Incomplete Contracts,” Remarks before George Mason University School of Law at 2-3 (Sept. 12, 2013), *available at* [https://www.ftc.gov/sites/default/files/documents/public\\_statements/ssos-frand-and-antitrust-lessons-economics-incomplete-contracts/130912cpip.pdf](https://www.ftc.gov/sites/default/files/documents/public_statements/ssos-frand-and-antitrust-lessons-economics-incomplete-contracts/130912cpip.pdf) (explaining that “the economics of hold-up began not as an effort to explain contract failure, but as an effort to explain real world contract terms, performance, and the enforcement decisions starting with the fundamental premise that contracts are necessarily incomplete”). There is empirical evidence that SSO contract terms vary both across organizations and over time in response to changes in perceived risk of patent holdup and other factors. *See* Joanna Tsai & Joshua D. Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, forthcoming 80(1) *ANTITRUST L.J.* (2015), *available at* [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2467939](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2467939).

<sup>8</sup> *See, e.g.*, Prepared Statement of the Federal Trade Commission Before the U.S. Senate Committee on the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights Concerning “Standard Essential Patent Disputes and Antitrust Law” at 6 (July 30, 2013), *available at* [https://www.ftc.gov/sites/default/files/documents/public\\_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standardessentialpatents.pdf](https://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statement-federal-trade-commission-concerning-standard-essential-patent-disputes-and/130730standardessentialpatents.pdf).

<sup>9</sup> *Id.* *See also* Maureen K. Ohlhausen, Commissioner, Fed. Trade Comm’n, “A Pragmatist’s Approach to Navigating the Intersection of IP and Antitrust,” Remarks at the 2013 Standards and Patents Conference at 11 (Dec. 4, 2013), *available at* <https://www.ftc.gov/public-statements/2013/12/pragmatists-approach-navigating-intersection-ip-antitrust> (“In keeping with my philosophy of strong protection for intellectual property rights, transparency, predictability, and fairness, and my reluctance to have government inject

As evidence of holdup, some point to a small number of court cases in which the court-determined FRAND royalty was lower than the patent holder's demand. Among the numerous flaws with this argument—even holding aside reasonable debate over whether the courts correctly found holdup in each of the cases—is the outcome of a handful of litigated cases says nothing about whether holdup is a widespread problem for competition and consumers.<sup>10</sup> Economists have long understood the shortcomings of making inferences about a population from a sample of litigated cases.<sup>11</sup>

### **III. SHIFTING THE BURDEN OF PROOF AT THE ITC TO REQUIRE SEP HOLDERS TO PROVE UNWILLINGNESS WOULD BE CONTRARY TO USTR'S DIRECTIVE AND WOULD CREATE CONFLICT WITH THE FEDERAL COURTS**

In his August 3, 2013 disapproval letter in the *Samsung* matter, Ambassador Froman instructed the ITC to “make explicit findings” to the extent possible on the presence or absence of patent holdup or reverse holdup in each particular case when conducting the public interest

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itself into free markets needlessly, I have spent my tenure advocating for a more detailed examination of the facts surrounding possible hold-up and for a more balanced treatment of the issue that includes analysis of the several market-based factors that could mitigate hold-up.”).

<sup>10</sup> It is worth noting that the district courts in the cases relied upon by commentators (e.g., *Microsoft v. Motorola* and *Innovatio*) employed methodologies that presumed the prevalence of both holdup and royalty stacking without requiring proof that either exists in a particular case. See *Microsoft Corp. v. Motorola, Inc.*, 2013 WL 2111217 at \*12, \*73-74 (W.D. Wash. Apr. 25, 2013); *In re Innovatio IP Ventures, LLC Patent Litig.*, 2013 WL 5593609 at \*8-10 (N.D. Ill. Oct. 3, 2013). This approach was squarely rejected by the Federal Circuit in *Ericsson v. D-Link Systems*, in which the Federal Circuit held that to be considered as part of a FRAND damages analysis, concerns about holdup and royalty stacking must be proven rather than presumed. See 773 F.3d 1201, 1234 (Fed. Cir. 2014). See also Sidak, *supra* note 3 at 65 (explaining that the adjudicated rates in *Microsoft v. Motorola* and *Innovatio* were not necessarily high enough to be FRAND, and that “[t]he methodologies used to determine the final rates in those two decisions contained significant economic flaws”); Anne Layne-Farrar & Koren W. Wong-Ervin, *An Analysis of the Federal Circuit's Decision in Ericsson v. D-Link*, CPI ANTITRUST CHRONICLE at 5-6 (Mar. 2015) (explaining the Federal Circuit's rejection of the approach taken by some of the district courts), available at <http://www.crai.com/sites/default/files/publications/An-Analysis-of-the-Federal-Circuits-Decision-in-Ericsson-v-D-Link.pdf>.

<sup>11</sup> See, e.g., George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUDIES 1 (1984).

inquiry.<sup>12</sup> Similarly, the Federal Circuit, in *Ericsson v. D-Link*, instructed that for concerns about holdup to be considered, they must be proven, and that the burden is on accused infringers to show that the patent holder used injunctive relief to gain undue leverage and demand supra-FRAND royalties.<sup>13</sup> The ITC, like federal courts, is well-equipped to conduct this fact-specific inquiry. Any proposal advocating that the ITC should presume the existence of holdup and shift the burden to the SEP holder to prove unwillingness would require the ITC to ignore the USTR's clear instructions and Federal Circuit precedent.

#### **IV. AN EVIDENCE-BASED APPROACH TO THE PUBLIC INTEREST INQUIRY PROTECTS INCENTIVES TO PARTICIPATE IN STANDARD SETTING**

An evidence-based approach to the public interest inquiry, i.e., one that requires proof that holdup actually occurred in a particular case, protects incentives to participate in standard setting by allowing SEP holders to seek and obtain exclusion orders when permitted by the SSO agreement at issue and in the absence of a showing of any improper use. In contrast, any proposal that would require the ITC to presume the existence of holdup and shift the burden of proof to SEP holders to show unwillingness threatens to deter participation in standard setting, particularly if an accused infringer can prove willingness simply by agreeing to be bound by terms determined by neutral adjudication. If the worst penalty an SEP infringer has to pay is the FRAND royalty it would have otherwise paid beforehand, then reverse holdup and holdout offer

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<sup>12</sup> Ltr. from Ambassador Michael B. G. Froman, U.S. Trade Representative, to The Honorable Irving A. Williamson, Chairman, International Trade Commission at 2 (Aug. 3, 2013), *available at* [https://ustr.gov/sites/default/files/08032013%20Letter\\_1.PDF](https://ustr.gov/sites/default/files/08032013%20Letter_1.PDF).

<sup>13</sup> 773 F.3d at 1234 (“In deciding whether to instruct the jury on patent hold-up and royalty stacking, again, we emphasize that the district court must consider the evidence on the record before it. The district court need not instruct the jury on hold-up or stacking unless the accused infringer presents actual evidence of hold-up or stacking. Certainly something more than a general argument that these phenomena are possibilities is necessary.”).



implementers highly profitable deferred tax strategies that are highly detrimental to SEP holders.<sup>14</sup>

## V. CONCLUSION

For the foregoing reasons, the Commission should affirm ALJ Essex's evidence-based approach and require proof that a SEP holder used injunctive relief to gain undue leverage and demand supra-FRAND royalties prior to precluding an exclusion order on public interest grounds based on holdup concerns. Such an approach is particularly suited to the ITC with its extensive experience analyzing disputed facts and making specific findings, will avoid conflict with the USTR's directive and federal court decisions, and will protect incentives to participate in standard setting.

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<sup>14</sup> Such delay tactics are magnified when the patent owner has a large worldwide portfolio of SEPs requiring it to file lawsuits around the world to adjudicate a FRAND royalty on a patent-by-patent basis. In such cases, international arbitration on a portfolio basis would appear to be the most efficient and realistic means of resolving FRAND disputes.