



U.S. Department of Justice

Antitrust Division

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Main Justice Building  
950 Pennsylvania Avenue, NW  
Washington, D.C. 20530-0001

May 18, 2018

Michael A. Carrier  
Professor, Rutgers University

Timothy J. Muris  
Senior Counsel, Sidley Austin LLP  
Professor, George Mason University

Re: Department of Justice Antitrust and Intellectual Property Policy

Dear Professor Carrier and Former Chairman Muris,

Thank you for your May 17, 2018 letter regarding my recent speeches explaining the United States' policy regarding the proper role of antitrust law in the context of standard setting organizations.

As you know, the Antitrust Division welcomes lively discussion and research regarding its policies, and we are happy to receive your or your clients' views as we consider such policies. Indeed, we have also received a letter from a number of antitrust and intellectual property scholars, including federal judges, in support of the United States' policies (attached hereto).

Though we are not able to comment on any pending investigations or evidence that we have reviewed, the policies of the United States reflect our observations and understanding of, among other things, actual standard setting activity, actions of participants in SSOs (including both patent holders and implementers), the current state of theoretical and empirical research into these matters, and, of course, the status of patent rights under the U.S. Constitution.

We hope that your views and those of your clients in this ongoing debate will help foster greater symmetry between concerns regarding patent hold-up and patent hold-out, and will help inform policies that advance innovation, competition, and free markets.

Thank you for your interest in antitrust enforcement.

Sincerely,



Makan Delrahim  
Assistant Attorney General

February 13, 2018

Assistant Attorney General Makan Delrahim  
Department of Justice Antitrust Division  
950 Pennsylvania Ave. NW  
Washington, DC 20530-0001

Dear Assistant Attorney General Delrahim,

As judges, former judges and government officials, legal academics and economists who are experts in antitrust and intellectual property law, we write to express our support for your recent announcement that the Antitrust Division of the Department of Justice will adopt an evidence-based approach in applying antitrust law equally to both innovators who develop and implementers who use technological standards in the innovation industries.

We disagree with the letter recently submitted to you on January 24, 2018 by other parties who expressed their misgivings with your announcement of your plan to return to this sound antitrust policy. Unfortunately, their January 24 letter perpetuates the long-standing misunderstanding held by some academics, policy activists, and companies, who baldly assert that one-sided “patent holdup” is a real-world problem in the high-tech industries. This claim rests entirely on questionable models that predict that opportunistic behavior in patent licensing transactions will result in higher consumer prices. These predictions are inconsistent with actual market data in any high-tech industry.

It bears emphasizing that no empirical study has demonstrated that a patent-owner’s request for injunctive relief after a finding of a defendant’s infringement of its property rights has ever resulted either in consumer harm or in slowing down the pace of technological innovation. Given the well understood role that innovation plays in facilitating economic growth and well-being, a heavy burden of proof rests on those who insist on the centrality of “patent holdup” to offer some tangible support for that view, which they have ultimately failed to supply in the decade or more since that theory was first propounded. Given the contrary conclusions in economic studies of the past decade, there is no sound empirical basis for claims of a systematic problem of opportunistic “patent holdup” by owners of patents on technological standards.

Several empirical studies demonstrate that the observed pattern in high-tech industries, especially in the smartphone industry, is one of constant lower quality-adjusted prices, increased entry and competition, and higher performance standards. These robust findings all contradict the testable implications of “patent holdup” theory. The best explanation for this disconnect between the flawed “patent holdup” theory and overwhelming weight of the evidence lies in the institutional features that surround industry licensing practices. These practices include bilateral licensing negotiations, and the reputation effects in long-term standards activities. Both support a feed-back mechanism that creates a system of natural checks and balances in the setting of royalty rates. The simplistic models of “patent holdup” ignore all these moderating effects.

Of even greater concern are the likely negative social welfare consequences of prior antitrust policies implemented based upon nothing more than the purely theoretical concern about opportunistic “patent holdup” behavior by owners of patented innovations incorporated

into technological standards. For example, those policies have resulted in demands to set royalty rates for technologies incorporated into standards in the smartphone industry according to particular components in a smartphone. This was a change to the longstanding industry practice of licensing at the end-user device level, which recognized that fundamental technologies incorporated into the cellular standards like 2G, 3G, etc., optimize the entire wireless system and network, and not just the specific chip or component of a chip inside a device.

In support, we attach an Appendix of articles identifying the numerous substantive and methodological flaws in the “patent holdup” models. We also point to rigorous empirical studies that all directly contradict the predictions of the “patent holdup” theory.

For these reasons, we welcome your announcement of a much-needed return to evidence-based policy making by antitrust authorities concerning the licensing and enforcement of patented innovations that have been committed to a technological standard. This sound program ensures balanced protection of all innovators, implementers, and consumers. We are confident that consistent application of this program will lead to a vibrant, dynamic smartphone market that depends on a complex web of standard essential patents which will continue to benefit everyone throughout the world.

Sincerely,

Jonathan Barnett  
Professor of Law  
USC Gould School of Law

Ronald A. Cass  
Dean Emeritus,  
Boston University School of Law  
Former Vice-Chairman and Commissioner,  
United States International Trade Commission

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Laurence A. Tisch Professor of Law,  
New York University School of Law  
James Parker Hall Distinguished Service Professor of Law Emeritus,  
University of Chicago Law School

The Honorable Douglas H. Ginsburg  
Senior Circuit Judge,  
United States Court of Appeals for the District of Columbia Circuit, and  
Professor of Law,  
Antonin Scalia Law School  
George Mason University

Justin (Gus) Hurwitz  
Assistant Professor of Law  
University of Nebraska College of Law

Keith N. Hylton  
William Fairfield Warren Distinguished Professor  
Boston University School of Law

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United States Patent & Trademark Office

The Honorable Paul Michel  
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Joshua D. Wright  
University Professor,  
Antonin Scalia Law School  
George Mason University  
Former Commissioner,  
Federal Trade Commission

## APPENDIX

Richard A. Epstein & Kayvan Noroozi, *Why Incentives for Patent Hold Out Threaten to Dismantle FRAND and Why It Matters*, BERKELEY TECH. L. REV. (forthcoming), <https://ssrn.com/abstract=2913105>

Anne Layne-Farrar, *Why Patent Holdout is Not Just a Fancy Name for Plain Old Patent Infringement*, CPI NORTH AMERICAN COLUMN (Feb. 2016), <https://www.competitionpolicyinternational.com/wp-content/uploads/2016/02/North-America-Column-February-Full.pdf>

Anne Layne-Farrar, *Patent Holdup and Royalty Stacking Theory and Evidence: Where Do We Stand After 15 Years of History?*, OECD INTELLECTUAL PROPERTY AND STANDARD SETTING (Nov. 18, 2014), <http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD%282014%2984&doclanguage=en>

Alexander Galetovic & Stephen Haber, *The Fallacies of Patent Holdup Theory*, 13 J. COMP. L. & ECON., 1 (2017), <https://academic.oup.com/jcle/article/13/1/1/3060409>

Alexander Galetovic, Stephen Haber, & Lew Zaretski, *An Estimate of the Average Cumulative Royalty Yield in the World Mobile Phone Industry: Theory, Measurement and Results* (Feb. 7, 2018), <https://hooverip2.org/working-paper/wp18005>

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

Douglas H. Ginsburg, Koren W. Wong-Ervin, & Joshua Wright, *The Troubling Use of Antitrust to Regulate FRAND Licensing*, CPI ANTITRUST CHRONICLE (Oct. 2015), <https://www.competitionpolicyinternational.com/assets/Uploads/GinsburgetalOct-151.pdf>

Douglas H. Ginsburg, Taylor M. Ownings, & Joshua D. Wright, *Enjoining Injunctions: The Case Against Antitrust Liability for Standard Essential Patent Holders Who Seek Injunctions*, THE ANTITRUST SOURCE (Oct. 2014), <https://ssrn.com/abstract=2515949>

Gerard Llobet & Jorge Padilla, *The Optimal Scope of the Royalty Base in Patent Licensing*, 59 J. L. & ECON. 45 (2016), <https://ssrn.com/abstract=2417216>

Keith Mallinson, *Theories of Harm with SEP Licensing Do Not Stack Up*, IP FIN. BLOG (May 24, 2013), <http://www.ip.finance/2013/05/theories-of-harm-with-sep-licensing-do.html>

Jorge Padilla & Koren W. Wong-Ervin, *Portfolio Licensing to Makers of Downstream End-User Devices: Analyzing Refusals to License FRAND-Assured Standard-Essential Patents at the Component Level*, 62 THE ANTITRUST BULLETIN 494 (2017), <https://doi.org/10.1177/0003603X17719762>

Jonathan D. Putnam & Tim A. Williams, *The Smallest Salable Patent-Practicing Unit (SSPPU): Theory and Evidence* (Sept. 2016), <https://ssrn.com/abstract=2835617>

Gregory Sidak, *The Antitrust Division's Devaluation of Standard-Essential Patents*, 104 GEO. L.J. ONLINE 48 (2015), <https://georgetownlawjournal.org/articles/161/antitrust-division-s-devaluation-of/pdf>

Joanna Tsai & Joshua D. Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, 80 ANTITRUST L.J. 157 (2015), <https://ssrn.com/abstract=2467939>

Joshua D. Wright, *SSOs, FRAND, and Antitrust: Lessons from the Economics of Incomplete Contracts*, 21 GEO. MASON L. REV. 791 (2014), <http://www.georgemasonlawreview.org/wp-content/uploads/2014/06/Wright-Website-Version.pdf>