Letter to Congress

March 2, 2015

To Members of the United States Congress:

We, the undersigned, are economics and legal scholars who study innovation, intellectual property law, and policy. We write to respond to lobbyists and others who claim there is little empirical evidence available to assess the performance of the American patent system. In fact, a large and increasing body of evidence indicates that the net effect of patent litigation is to raise the cost of innovation and inhibit technological progress, subverting the very purpose of the patent system. As members of Congress debate reforms to improve the patent system we hope they appreciate the failings of the current system, and implement salutary reforms.

Over the last five years, academic researchers have published over two dozen empirical studies on patent litigation and its economic impacts (see the attached bibliography for a selection). These studies have been conducted by researchers with diverse views and using different methodologies.

The preponderant economic picture these studies present is that patent litigation now imposes substantial costs, particularly on small and innovative firms, and that these costs have tended overall to reduce R&D, venture capital investment, and firm startups. Not one study of the economic impact of current patent litigation concludes that the effects are negligible.

The number of defendants in patent lawsuits filed in 2009 was five times the annual number during the 1980s. By most tallies, the majority of lawsuits are now filed by so-called "patent assertion entities" (PAEs), popularly known as patent trolls. Estimates based on surveys, on firm 10-K filings, and on stock prices suggest that PAE litigation has been costing firms tens of billions of dollars per year since 2007. Startups and venture-backed firms, especially, report significant operational impacts from PAE lawsuits in survey-based studies. An econometric analysis finds that the more R&D a firm performs, the more likely it is to be hit with a patent lawsuit, all else equal. Another study associates lawsuits from PAEs with a decline of billions of dollars of venture capital investment; another found that extensive lawsuits caused small firms to sharply reduce R&D spending; and yet another

found that costly lawsuits caused publicly listed defendant firms to substantially curtail R&D spending.

Although each of these studies has limitations and none is conclusive by itself, a consistent picture emerges: the patent system provides strong protection without excessive litigation in some sectors such as pharmaceuticals, but substantial evidence highlights serious problems with patent litigation in many other industries. Even if the patent system on the whole promotes innovation, it does so despite the social costs that result from this litigation, not because of it.

Congress, the courts, and the Patent and Trademark Office have all made changes in recent years that help mitigate this problem. The Inter Partes Review and Covered Business Method proceedings established by the America Invents Act of 2011 have helped remove hundreds of invalid patents, many already involved in litigation. Supreme Court decisions have strengthened patentability standards and have somewhat lowered the hurdles to feeshifting in patent cases. Perhaps as a result, patent lawsuit filings declined modestly last year from the record setting level of 2013. While month-to-month comparisons are variable, 18% fewer patent lawsuits were filed last year than in 2013.

Nevertheless, patent litigation rates remain at detrimentally high levels. Indeed, much of the empirical research mentioned above covers periods prior to the last several record-breaking years for patent litigation. That is, the research demonstrates that patent lawsuits were already harming innovation when litigation rates were *significantly below current levels*. In this light we are not surprised that a growing chorus of high-tech entrepreneurs and state attorneys general has stepped forward to urge that the patent system should work for innovators and not against them. Though we understand that crafting and implementing effective reform will be difficult, we write to emphasize the rewards from effective reform could be great.

Sincerely,*

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A Selection of Recent Empirical Research on Patent Litigation**

- Allison, John R., Emerson H. Tiller, Samantha Zyontz, and Tristan Bligh. "<u>Patent Litigation</u> and the Internet." Stanford Technology Law Review (2012): 3.
- Allison, John R., Mark A. Lemley, and Joshua Walker. "Patent Quality and Settlement Among Repeat Patent Litigants." Georgetown Law Review, 99 (2011): 677.
- Anderson, J. Jonas, and Peter S. Menell. "<u>Informal Deference: A Historical, Empirical, and Normative Analysis of Patent Claim Construction</u>." Northwestern University Law Review, 108 (2014): 1.
- Bessen, James. "The Evidence Is In: Patent Trolls Do Hurt Innovation." Harvard Business Review (July 2014).
- Bessen, James and Michael J. Meurer. "<u>The Patent Litigation Explosion</u>." Loyola University Chicago Law Journal, 45 (2013): 401.
- Bessen, James and Michael J. Meurer. "The Private Costs of Patent Litigation." Journal of Law, Economics and Policy, 9 (2012): 59.
- Bessen, James and Michael J. Meurer. "<u>The Direct Costs from NPE Disputes</u>." Cornell Law Review, 99 (2014): 387.
- Bessen, James, Jennifer Ford, and Michael J. Meurer. "The Private and Social Costs of Patent Trolls." Regulation 34(4) (2011): 26.
- Chien, Colleen V. "Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents." North Carolina Law Review, 87 (2009): 1571.
- Chien, Colleen V. "Predicting Patent Litigation." Texas Law Review, 90 (2011): 283.
- Chien, Colleen V. "Startups and Patent Trolls." Stanford Technology Law Review, 17 (2014): 461.
- Chien, Colleen V. "Patent Assertion and Startup Innovation." New America Foundation (2013).
- Chien, Colleen V. "Patent Trolls by the Numbers." Santa Clara University Legal Studies Research Paper No. 08-13 (2013).
- Cohen, Lauren, Umit Gurun, and Scott Duke Kominers. "Patent Trolls: Evidence from Targeted Firms." No. w20322. National Bureau of Economic Research (2014).
- Cotropia, Christopher A., Jay P. Kesan, and David L. Schwartz. "<u>Unpacking Patent Assertion Entities (PAEs)</u>." Minnesota Law Review, 99 (2014): 649.

7

^{**} This list is intended to be illustrative, not exhaustive. Inclusion does not necessarily imply the authors' endorsement of this letter.

- Ewing, Tom and Robin Feldman. "The Giants Among Us." Stanford Technology Law Review (2012): 1.
- Feldman, Robin, Tom Ewing, and Sara Jeruss. "The America Invents Act 500 Expanded:

 <u>Effects of Patent Monetization Entities.</u>" UCLA Journal of Law & Technology, 17 (2013): 1.
- Feldman, Robin. "Patent Demands & Startup Companies: The View from the Venture Capital Community." Yale Journal of Law & Technology, 16 (2014): 236.
- Feldman, Robin, and Mark A. Lemley. "<u>Does Patent Licensing Mean Innovation?</u>." Working Paper (2015).
- Fischer, Timo, and Joachim Henkel. "<u>Patent Trolls on Markets for Technology: An Empirical Analysis of NPEs' Patent Acquisitions</u>." Research Policy, 41, no. 9 (2012): 1519.
- Helmers, Christian, Brian J. Love, and Luke McDonagh. "<u>Is There a Patent Troll Problem in the U.K.?</u>." 24 Fordham Intellectual Property Media and Entertainment Law Journal, 24 (2014): 509.
- Jeruss, Sara, Robin Feldman, and Joshua Walker. "<u>America Invents Act 500: Effects of Patent Monetization Entities on US Litigation</u>." Duke Law and Technology Review, 11 (2012): 357.
- Khan, Zorina. "Trolls and Other Patent Inventions: Economic History and the Patent Controversy in the Twenty-First Century." Working Paper (2013).
- Love, Brian J. "An Empirical Study of Patent Litigation Timing: Could a Patent Term Reduction Decimate Trolls Without Harming Innovators?." University of Pennsylvania Law Review, 161 (2013): 1309.
- Love, Brian J., and Shawn Ambwani. "<u>Inter Partes Review: An Early Look at the Numbers.</u>" University of Chicago Law Review Dialogue, 81 (2014): 93.
- Miller, Shawn P. "What's the Connection Between Repeat Litigation and Patent Quality? A (Partial) Defense of the Most Litigated Patents." Stanford Technology Law Review, 16 (2013): 313.
- Miller, Shawn P. "Where's the Innovation: An Analysis of the Quantity and Qualities of Anticipated and Obvious Patents." Virginia Journal of Law and Technology, 18 (2013): 1.
- Reidenberg, Joel R., Jamela Debelak, Daniel Gross, and Elaine Mindrup. "<u>The Impact of the Acquisition and Use of Patents on the Smartphone Industry</u>." Center for Law and Information Policy, Fordham Law School (2012).
- Risch, Michael. "Patent Troll Myths." Seton Hall Law Review, 42 (2012): 457.

- Risch, Michael. "A Generation of Patent Litigation: Outcomes and Patent Quality." San Diego Law Review (2015), Forthcoming.
- Rooksby, Jacob H. "<u>Innovation and Litigation: Tensions Between Universities and Patents and How to Fix Them</u>." Yale Journal of Law and Technology, 15 (2013): 312.
- Schwartz, David L. "The Rise of Contingent Fee Representation in Patent Litigation." Alabama Law Review, 64 (2012): 335.
- Smeets, Roger. "Does Patent Litigation Reduce Corporate R&D? An Analysis of US Public Firms." Working Paper (2014).
- Tucker, Catherine. "Patent Trolls and Technology Diffusion." Working Paper (2011).
- Tucker, Catherine. "<u>The Effect of Patent Litigation and Patent Assertion Entities on Entrepreneurial Activity</u>." Working Paper (2014).
- Turner, John L., James Bessen, Peter Neühausler, and Jonathan W. Williams. "<u>The Costs and Benefits of United States Patents</u>." Working Paper (2014).
- U.S. Government Accountability Office, "<u>Intellectual Property: Assessing Factors That Affect Patent Infringement Litigation Could Help Improve Patent Quality.</u>" Report to Congressional Committees GAO-13-465 (2013).