Before the
FEDERAL TRADE COMMISSION
Washington, D.C. 20580

In the Matter of	)	
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PAE Reports: Paperwork Comment	)	Project No. P131203
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Comments of ADTRAN, Inc.

ADTRAN, Inc. commends the Federal Trade Commission for launching an investigation of the activities of patent assertion entities (PAEs).[1] ADTRAN is pleased to provide comments to the Commission regarding the great need for this study, and the significant harm that PAEs do to our innovative activities and innovation in the economy generally. By way of background, ADTRAN, founded in 1986 and headquartered in Huntsville, Alabama, is a leading global manufacturer of networking and communications equipment, with an innovative portfolio of solutions for use in the last mile of today's telecommunications networks. ADTRAN's equipment is deployed by some of the world's largest service providers, as well as distributed enterprises and small and medium businesses.

I.

Our experience, the experience of many other technology firms, and the recent experience of many small businesses in the service industries indicate that the role of patents in the economy has changed dramatically in the past decade. There has been an explosion of patent demand letters and patent lawsuits lodged by PAEs. As recently as 2002, PAEs accounted for less than 5% of patent lawsuits;[2] today they account for more than half of all patent litigation in the United States.[3]

Most of the defendants against PAE lawsuits are successful innovators, and few of the parties receiving demand letters intentionally violated the claimed patent rights asserted against them.

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[1] PAEs are also referred to as "patent trolls" or "non-practicing entities" (NPEs). In order to be consistent with the FTC notice, we will refer to these entities as PAEs.

[2] Jay P. Kesan, & Gwendolyn G. Ball, How Are Patent Cases Resolved? An Empirical Examination of the Adjudication and Settlement of Patent Disputes, U. Illinois Law & Economics Research Paper No. LE05-027. (2005).

[3] Patent Freedom. 2012. "Litigations Over Time," available at: https://www.patentfreedom.com/about-npes/litigations/; Feldman, Robin, Ewing, Thomas & Jeruss, Sara, The AIA 500 Expanded: Effects of Patent Monetization Entities, UC Hastings Research Paper No. 45, 7 (2013) available at SSRN: http://ssrn.com/abstract=2247195 (patent monetization entities filed 58.7% of the patent lawsuits in 2012).

Nevertheless, the costs of responding to PAE activities are significant. Bessen and Meurer estimate the direct accrued costs of non-practicing entity patent assertions at $29 billion in 2011.[4]

In a separate study that includes both direct and indirect costs of non-practicing entity litigation, Bessen, Ford, and Meurer measure an $80 billion annual cost.[5] The figure in the second study is greater because it includes all business costs, and not just payments to outside counsel and license payments. Indirect business costs include distraction of research and management personnel, disruption of supply chains, harm to customer relations, and disruption and delay of research and development activities. In any event, there is a significant amount of time, effort, and money wasted on this litigation that could be much better spent by those companies on actual research, development and innovation.

Much of the burden from PAE activity falls on small and medium-sized companies.[6] Feldman's recent survey of venture capitalists shows that PAE demand letters impose a significant impact on start-ups.[7] Similarly, Chien reports that about one half of the venture capitalists in her survey had invested in companies that experienced "one or more significant operational impacts" as the result of PAE assertions. Specifically, PAE assertions caused 24% of the companies to experience a delay in hiring, and 12% chose to exit a business line or an entire business.[8]

ADTRAN's own experience with PAEs is instructive. Just since the second half of 2012, PAEs have filed five patent infringement suits against ADTRAN. The cases filed directly against us are only part of the picture. In this same time period, we have received even more demands for indemnification from customers that have been sued by PAEs for patent infringement. Almost without exception, the cases against us and against our customers involve assertions that the patents-in-suit cover some aspect of an industry standard. The functionality at issue is often embedded in a component part over which we had no design input or control, and the operation of which we may have little direct knowledge, complicating matters even further. Settlement demands are made early and often, and they usually appear to be based upon potential litigation costs rather than a true measure of the alleged value of the patent(s) at issue. As noted by the Bessen, Ford, and Meurer study, in addition to the direct costs of PAE activity, efforts by each party in the supply chain to shift costs to the source of the alleged infringement risks – and efforts to resist such cost shifting – impose undue stress on valuable business relationships.

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[4] James Bessen and Michael J. Meurer, The Direct Costs from NPE Disputes, 99 Cornell Law Review (forthcoming 2014, available at http://ssrn.com/abstract=2091210).

[5] James Bessen, Jennifer Ford & Michael J. Meurer, The Private and Social Costs of Patent Trolls, Regulation, 26 (Winter 2011-2012).

[6] Bessen and Meurer, Direct Costs.

[7] Feldman et al. Monetization Entities.

[8] Colleen Chien, Patent Assertion and Startup Innovation, Open Technology Institute, September 2013, available at: http://www.newamerica.net/sites/newamerica.net/files/policydocs/Patent%20Assertion%20and%20Startup%20Innovation_updated.pdf.

The litigation against ADTRAN and its customers is just the most public aspect of PAE activity that we must deal with. ADTRAN, like many companies, receives large numbers of notice and demand letters from PAEs. These letters are typically short on detail and analysis and appear to be nothing more than an effort to establish a basis for alleging willful infringement should litigation later occur. Without any substantive analysis on the part of the PAEs, the cost of attempting to determine whether a PAE's allegations have merit falls entirely on ADTRAN. In many cases, we never hear from the PAE again. Others are more aggressive and demand we enter license negotiations and pay royalties to avoid litigation. We believe our experience is typical of technology companies today.

Some PAEs claim that instead of hurting startup tech firms, they are helping them by enforcing their patents. An analysis of publicly listed PAEs, however, finds that very little of the cost imposed on defendants actually consists of a transfer to small patentees – only about 5% of the out-of-pocket costs paid by defendants was transferred to inventors in the form of royalties or patent acquisition payments, and only about half of that went to small inventors.[9]

In a case study of a set of lawsuits brought by the PAE Acacia, Catherine Tucker quantifies some of the indirect costs to defendants from litigation.[10] She examines the effect of a lawsuit against several firms that make medical imaging software. She compares the impact of the lawsuit on sales of both medical imaging and text-based medical software produced by the targeted firms. She also compares the sales by the targeted firms to the sales of medical imaging software made by other firms in the industry who were not targeted with a lawsuit. She finds that sales of medical imaging software declined by one-third for targeted firms. She attributes the sales decline to a "lack of incremental innovation in the period when litigation is ongoing," and she opines that incremental innovation was deterred by concerns it would create additional risks in the ongoing litigation.

PAE patent litigation capitalizes on ambiguity in the scope of patent protection and consequently turns the patent system on its head by impeding technical progress. In those fields where the scope of patent protection is normally quite clear, particularly in the chemical and pharmaceutical areas, the U.S. patent system generally operates as intended to encourage and subsidize innovation. Innovators in these fields enjoy the benefits they derive from their patents and are rarely sued for patent infringement by others. For most other inventions, especially software and business methods, the U.S. patent system effectively imposes a tax on innovation.[11] The "tax" arises because the benefits derived from one's own patents are swamped since innovative firms must defend against patent infringement suits through no fault of their own. Inadvertent (alleged) infringement is common, because, outside chemicals and pharmaceutical

[9] Bessen and Meurer, Direct Costs.
[10] Catherine Tucker, Patent Trolls and Technology Diffusion, MIT Working Paper (2013) available at http://ssrn.com/abstract=1976593.
[11] James Bessen & Michael J. Meurer, Patent Failure: How judges, bureaucrats and lawyers put innovators at risk 46-72 (2008).

inventions, the patent system often fails to provide clear notice to the world of the existence and scope of patent-based property rights.

Notice failure is likely for PAE lawsuits, because PAEs commonly distort and stretch patents well beyond their original intent. Sixty-two percent of the time PAE suits feature software patents which are notoriously difficult to interpret.[12] Allison, Lemley, and Walker study patents litigated multiple times and usually asserted by PAEs; they find that software patents account for 94% of such lawsuits.[13] The patents asserted in PAE lawsuits are often subject to lengthy prosecutions which delays public access to information about patent claims.[14] Rather than transferring technology and aiding R&D it appears that PAEs usually arrive on the scene after the targeted innovator has already commercialized some new technology.[15]

Popular attention has been drawn to PAE activity in the past couple of years because now, in addition to the assertion of weak claims against successful innovators, PAEs are also lodging frivolous claims, sometimes against scores of defendants including the end users of high-tech products such as scanners, Wi-Fi, and e-commerce software. These assertions are well-documented by the press, but there has not yet been academic research that quantifies this problem – this strategy is too new, and it does not leave much of a paper trail.

II.

The evidence currently available suggests that PAE assertions and lawsuits impose a significant "tax" on innovators, with little corresponding benefit to genuine inventors. Some of the causes of these problems are well known, and we fully support ongoing efforts in Congress to address them without delay, as recently suggested by Chairwoman Ramirez.[16] On the other hand, we believe there are abusive behaviors and practices by PAEs – the nature, causes, and competitive effects of which are not well known. The FTC study therefore is timely and could be helpful in generating additional evidence bearing on these issues. We think the proposed questions are extremely important, and we think that the study should be scaled up to elicit responses from even more firms so that the statistical reliability of the results will be enhanced. We also encourage the Commission to issue an interim report so that Congress, the technology sector, and the public at large can benefit from the study as soon as possible.

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[12] Bessen and Meurer, Regulation, p. 29.

[13] John R. Allison, Mark A. Lemley & Joshua Walker, Extreme Value or Trolls on Top? Evidence From the Most-Litigated Patents, 158 U. Penn. L. Rev.1, 12-15 (2009).

[14] John R. Allison, Mark A. Lemley & Joshua Walker, Patent Quality and Settlement Among Repeat Patent Litigants, 99 Geo. L. J. 677, 686-689 (2010).

[15] Federal Trade Commission, The Evolving IP Marketplace: Aligning patent notice and remedies with competition 75-80 (2011).

[16] See Remarks of Chairwoman Edith Ramirez, Fall Networking Event, ABA Antitrust Section's Intellectual Property Committee, Washington, DC (Nov. 12, 2013), available at http://www.ftc.gov/sites/default/files/documents/public_statements/remarks-chairwoman-edith-ramirez-fall-networking-event-aba-antitrust-sections-intellectual-property/131112er-ip-committee.pdf.

We recommend that the FTC incorporate the following additional questions into its investigation. The first pair of questions concerns patent acquisition and could be incorporated into Request E.

E. Patent Acquisition and Transfer Information:

1. *For each Patent Acquired by the Firm since January 1, 2008, state whether the*

Firm Acquired the Patent individually or as part of a Patent Portfolio, and provide the following information:

- *whether the Patent(s) was Acquired as part of an agreement to end a patent assertion initiated by the Firm*
- *whether the Inventor of the patented invention has been or will be compensated as an expert witness or otherwise compensated as an employee or contractor of the Firm*

The first question is designed to shed light on whether the goal of some PAE assertions is to build their patent portfolio, by targeting parties who own patents that might enhance an assertion campaign.

The second question is designed to give a more complete picture of the methods that PAEs might use to compensate the inventors named in the patents acquired by PAEs.

We next suggest that the FTC refine Request F by including more detail in its question about technology transfer.

F. Patent Assertion Information:

3. *License Information:*

(9) whether the license agreement includes any provisions for technology transfer from the Firm to the licensee(s); specify whether:

> *(a) the Firm provided training or transferred technical know-how, documents, or manuals;*
>
> *(b) the agreement included a trade secret license;*
>
> *(c) the agreement included a copyright or trademark license;*

This is a crucial question, and the FTC investigation could make a significant contribution to the policy analysis of PAE activities if it elicits information about PAE technology transfer. We believe it would be helpful to seek more detailed responses regarding the nature of technology transfer. Outside of the PAE setting, technology transfer agreements often involve bundles of patented technology with information protected by trade secret law, and tacit knowledge that is difficult to transfer except through in-person training. Patent licenses may also bundle copyright

and trademark licenses for mature technology. The presence or absence of these ancillary terms would be informative as to whether PAE claims that they transfer technology are credible.

We suggest two other lines of questioning that might be integrated into various requests. The first line of questions asks whether PAE activities are purely unilateral, or instead sometimes involve coordination with independent parties. For example:

- *Does the Firm communicate its plans and/or coordinate its patent acquisitions with independent parties?*
    - *Who are these other parties and are they other PAEs, operating companies, or non-practicing entities providing insurance or other services?*
- *Does the Firm communicate its plans and/or coordinate its patent assertion activities with independent parties?*
    - *Who are these other parties and are they other PAEs, operating companies, or non-practicing entities providing insurance or other services?*
    - *To the extent that activities are coordinated with other parties, what is the nature of this coordination?*

Answers to these questions would contribute to our understanding of the competitive effects that follow when PAEs cooperate with each other, cooperate with non-practicing entities that do not assert patents, or cooperate with operating companies.

The second line of questions asks about the global scope of PAE activities. For example:

- *How many non-U.S. patents and patent applications does the Firm own or control?*
- *If the Firm owns or controls non-U.S. patents, does it offer global patent licenses to licensees?*
- *If the Firm sometimes does and sometimes does not offer a global license, then explain why a global license is sometimes not granted?*
- *Does the Firm assert non-U.S. patents?*
- *Does the Firm litigate outside of the United States?*

There is little empirical evidence or policy analysis of global PAE activity. But given the diversity of PAE business models and the fluidity of their practices, it is important to be attentive to the possibility of growth in multinational patent assertion by PAEs.

Respectfully submitted,

ADTRAN, Inc.