No. 15-1330

In the Supreme Court of the United States

MCM PORTFOLIO, LLC,

Petitioner,

v.

HEWLETT-PACKARD COMPANY, AND MICHELLE K. LEE, DIRECTOR, U.S. PATENT AND TRADEMARK OFFICE.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF OF *AMICI CURIAE* GARY LAUDER, PAUL MORINVILLE, ROBERT SCHMIDT, ARCH VENTURE PARTNERS, NATIONAL SMALL BUSINESS ASSOCIATION, SMALL BUSINESS TECHNOLOGY COUNCIL, NATIONAL INNOVATION ASSOCIATION, UNITED INVENTORS ASSOCIATION, US INVENTOR, INC., INDEPENDENT INVENTORS OF AMERICA, AMERICAN INVENTORS FOR JUSTICE, EDISON INNOVATORS ASSOCIATION, MINNESOTA INVENTORS NETWORK, TEXAS INVENTORS ASSOCIATION, SOUTH FLORIDA INVENTORS SOCIETY, TAMPA BAY INVENTORS COUNCIL, HOUSTON INVENTORS ASSOCIATION, HOUSTON YOUNG INVENTORS SHOWCASE, SAN DIEGO INVENTORS FORUM IN SUPPORT OF PETITIONER

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INTEREST OF *AMICI CURIAE*[1]

Amici, who are listed in the attached appendix, include inventors, venture capitalists, angel investors, and small-business owners with first-hand experience with America's patent system. They have spent substantial portions of their lives working to ensure that the very real flaws in that system are addressed in a manner that preserves those features that have made it one of the driving forces of the world's most powerful economy. They have also personally spoken out against the administrative regime at issue in this case.[2]

Amici also include a leading venture capital firm along with organizations that advocate for inventors, start-ups, and small businesses, with members ranging from leaders in the country's most technologically sophisticated industries to inventors as young as third grade who are just beginning to

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[1] Counsel for all parties received notice of *amici curiae*'s intent to file this brief 10 days before its due date. All parties have consented to the filing of this brief. No counsel for a party authored this brief in whole or in part, and no entity, other than *amici*, their members, or their counsel, has made a monetary contribution to the preparation or submission of this brief.

[2] *See, e.g.*, Gary Lauder, *New Patent Law Means Trouble for Tech Entrepreneurs*, Forbes, Sept. 20, 2011, <http://onforb.es/1Z8Yj0b>; Paul Morinville, *How patent laws are harming children and America's innovative future*, IPWatchdog Blog (Mar. 26, 2016), <http://bit.ly/1VqYZis>; Hearing Before the Senate Small Bus. & Entrepreneurship Comm. (Mar. 19, 2015), <http://1.usa.gov/1snX17d>(testimony of Robert N. Schmidt, Small Bus. Technology Council).

make their mark in the innovation economy.

Amici's extensive experience with the patent system and its ties to the health of the American economy make them well situated to explain the importance of the issues presented in this case. *Amici* and their members know from personal experience that Congress's action has sapped many of the advantages of patents to inventors and investors. If Congress's action is left standing, things will only get worse.

SUMMARY OF THE ARGUMENT

This case raises the same issue on which the Court granted certiorari in *American Airlines, Inc. v. Lockwood*, 515 U.S. 1121 (1995), but was forced to leave undecided when the patent owner withdrew his jury demand:[3] whether a patent owner has a Seventh Amendment right to a jury trial on the issue of his patent's validity in an Article III court. Pet. for Writ of Certiorari, *Lockwood*, No. 94-1660, 1995 WL 17048342 (Apr. 10, 1995). Although *Lockwood* concerned whether a patent's validity could be determined by declaratory judgment in district court, rather than through an administrative procedure, one commentator remarked that it left the "authority of Congress to create administrative mechanisms for reviewing patent validity * * * unclear," which would

[3] After the patentholder mooted the constitutional issue by withdrawing its jury demand, the Court vacated the Federal Circuit decision and remanded the case to the district court. *See American Airlines, Inc. v. Lockwood*, 515 U.S. 1182 (1995).

be raised if any of the proposals for "strengthening the *inter partes* character of administrative review proceedings" being considered at that time were enacted, which would raise "serious questions" about whether such proceedings could comply with "the Seventh Amendment guarantee."[4]

Congress's creation of the inter partes review (IPR) procedure in the Leahy-Smith America Invents Act, Pub. L. 112-29, 125 Stat. 284 (2011), has raised this constitutional question anew, and again this Court is presented with an opportunity to decide it. Scholars are of the view that "the time is ripe for Supreme Court review of the putative right to have a jury decide whether patents are valid."[5] And the particular harms imposed by IPR provide compelling reason to for it to take this opportunity.

IPR was meant to address the threats posed by "patent trolls"—firms that abuse patent protection through harassing litigation relying on speculative assertions of infringement upon patents of dubious validity—by providing a cost-efficient alternative to litigation to challenge those patents' questionable validity. That streamlining goal was laudable. But Congress went too far by disrespecting patentholders' property rights to achieve those supposed efficiencies. IPR strips patentholders of essential protections they

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[4] Mark D. Janis, *Rethinking Reexamination: Toward A Viable Administrative Revocation System for U.S. Patent Law*, 11 Harv. J. L. & Tech. 1, 40 (1997).

[5] Mark A. Lemley, *Why Do Juries Decide if Patents Are Valid?*, 99 Va. L. Rev. 1673, 1676 (2013).

would enjoy if they were defending their patents in the federal judicial system, including a jury of their peers, a disinterested, life-appointed judge, and procedural features that limit the scope of potential liability. In their place, Congress erected a heavily slanted administrative regime that invalidates patents by design, even when those same patents would be upheld in district court.

Amici agree with Petitioner that the IPR procedure was beyond Congress's power to impose, and its underpinning rationale—that patents are a matter of administrative largesse, rather than a constitutionally protected property right—is constitutionally infirm. *Amici* write separately because this case presents an issue of enormous significance with far-reaching consequences for inventors, investors, and small-business owners.

Patents are critical for the many participants in the innovation ecosystem. In the uphill battle of invention, patents level the playing field against better-armed incumbents, and are key to inducing others to take chances on new ideas. The founders that must leave safe jobs, investors who risk total losses, and early customers who hitch the structure of their businesses—and their reputations—to unproven products, all stake their livelihoods on the stability that meaningful patent protection provides. Congress's creation of IPR harms all of these participants by introducing expense and uncertainty into *all* patents, measurably diminishing their utility as a durable asset on which new businesses, new industries—and indeed, the entire American

economy—all depend.

The necessity of affirming the property interests at stake, recognized since before the Founding, provides compelling reason for the Court to consider the constitutionality of the IPR procedure. And the need to protect innovators from incumbents, as well as to undo the ongoing harms inflicted by this administrative scheme, counsel in favor of taking this opportunity to decide that issue. The practical problems produced by Congress's improper supplanting of federal district courts' legitimate authority will only worsen over time. And Congress's constitutionally infirm understanding of patent property rights is likely to taint further patent legislative efforts already on the horizon. Accordingly, *amici* urge the Court to grant the petition for writ of certiorari in this case.

ARGUMENT

I. The Constitutionality of Inter Partes Review Is an Issue of Exceeding Importance to Inventors, Fledgling Businesses, and The Entire American Economy.

In a process borne out of heated political impetus to do *something* to stop "patent trolls," Congress enacted an administrative system that has profoundly diminished the value of *all* patent rights.[6] The power

[6] Brian T. Yeh, Cong. Research Serv., R42668, *An Overview of the "Patent Trolls" Debate* 2 (Aug. 2012) <http://bit.ly/1TRz42h> (noting "[t]he proliferation of PAEs" as one of the factors leading

Congress has asserted, instituting tribunals to attack the validity of patents without the safeguards of Article III courts, unsettles the very nature of a patent as a constitutionally protected property right. And the administrative regime Congress enacted to replace district court litigation further devalues those patent rights, by undermining them with layers of expense, bureaucracy, and uncertainty, all with serious consequences for inventors, investors, innovation, creation of good-paying jobs, and the American economy as a whole.

A. Congress's creation of inter parties review undermines patent rights by making patents more risky and expensive.

In the America Invents Act, Congress sought to create an administrative form to promote challenges to patents. IPR thus displaced settled mechanisms for reviewing patent validity—including both inter partes reexamination and adjudication in court—and created instead a new review mechanism uniquely favorable to challengers and burdensome to patentholders.

1. Inter partes review proceedings strip patentholders of important protections they would enjoy in district court.

IPR proceedings strip patentholders of many of the important protections they would enjoy in district court. Instead of a jury of their peers and a district judge whose impartiality is ensured by life tenure and

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to the AIA).

a constitutionally guaranteed salary, they face the administrative judges of the PTAB, who owe their salaries, and their jobs, to the Secretary of Commerce. 35 U.S.C. § 6(a).

PTAB proceedings also discard many of the structural protections enjoyed by district court litigants that place limits on a patentholder's ultimate legal exposure. A petitioner might be barred from filing an IPR petition if the party has already sued in district court to invalidate the patent. *Id.* § 315(a)(1). And petitioners are likewise estopped from raising in future litigation any grounds for invalidity they raised or should have raised in a failed IPR. *Id.* § 315(e)(2). But other potential petitioners (who might be working in combination with the original petitioner) are free to challenge the patent's validity, in court or in a future IPR proceeding, even on the same grounds as the initial petition.

Moreover, the circle of potential IPR petitioners is limitless. Unlike plaintiffs in district court, who must be personally aggrieved by a patent in order to challenge it, any person may petition to have a patent invalidated, regardless of whether its alleged infirmity affects them in any way. 35 U.S.C. § 311(a). This lifting of standing limitations is frequently abused in ways the statutory methods for screening IPR petitions, *id.* § 314(a), have proven ineffective at weeding out. The evidence from only the first few years of IPR proceedings shows that they are frequently utilized by larger competitors to weaken smaller, more innovative ones, as well as by vultures seeking to extract nuisance settlements. Gregory

Dolin, *Dubious Patent Reform*, 56 B.C. L. Rev. 881, 932-33 (2015). Indeed, the ability of anyone to attack any patent in an IPR proceeding has fostered a cottage industry of hedge funds that make money by shorting a company's stock, then attacking its patents to bring the company's stock price down.[7]

Further, because petitioners need not prove injury from a particular patent, or particular patent claim, in order to challenge it, they may choose the most important and valuable portions of a patent to attack, which imposes tremendous settlement pressure on patentholders and often means that even if some claims survive review, the patent's overall utility is permanently compromised. The absence of a discrete set of potential petitioners also makes it difficult for inventors and potential investors to adjust their behavior to avoid a potential IPR, as they might do to avoid litigation.

2. The process of inter partes review introduces new uncertainty into otherwise settled patent rights.

Making matters worse, the IPR administrative scheme is heavily stacked against the patentholder, converting the PTAB judges into patent "death squads, killing property rights."[8] An IPR petitioner need only prove invalidity by a preponderance of the

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[7] Joseph Walker & Rob Copeland, *New Hedge Fund Strategy: Dispute the Patent, Short the Stock*, Wall St. J., Apr. 7, 2015, <http://on.wsj.com/1GJSjDE>.

[8] Peter J. Pitts, *'Patent Death Squads' vs. Innovation*, Wall St. J., June 10, 2015, <http://on.wsj.com/1MsqErB>.

evidence, 35 U.S.C. § 316(e), rather than the "clear and convincing evidence" standard required in court, *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 111 (2011). And the PTAB's often-dispositive findings made in the course of claim construction are accorded deferential substantial evidence review. *In re Morsa*, 713 F.3d 104, 109 (Fed. Cir. 2013).

The PTAB also gives a patent claim its broadest reasonable interpretation in an IPR proceeding, rather than its ordinary meaning, which makes an invalidity finding more likely by bringing into play a larger share of prior relevant art. 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268 (Fed. Cir. 2015). In fact, at oral argument in *Cuozzo Speed Technologies, LLC v. Lee*, No. 15-446, Tr. 31, the Government conceded that these structural differences "guarantee" that IPR proceedings and district court litigation will often produce different results. Sure enough, the PTAB invalidates patents in IPR review at a very high rate, a feature which has attracted petitioners like magnets, making the PTAB America's most popular patent court.[9]

As of April 2016, 4,891 IPR petitions have been filed since the PTAB's inception; of the 943 that have reached a final decision, 72% resulted in every challenged claim being invalidated; 14% resulted in some claims being invalidated; and only 14% resulted

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[9] Scott A. McKeown, *PTAB Quickly Becomes Busiest Patent Court in U.S.,* Patents Post-Grant Blog (July 25, 2013), <http://bit.ly/1NXKm4L>.

in all of the challenged claims being upheld.[10] This is a far higher rate of invalidation than in federal district court, where patents are held invalid in only about 46% of cases. Dolin 927. And this disparity is all the more striking because in litigation, unlike IPR review, patents can be invalidated on grounds aside from novelty and obviousness, such as inequitable conduct.[11]

The casual observer might contend that these high reversal rates reflect the weakness of the patents that might be expected to provoke an IPR petition. But the evidence is to the contrary. IPR review is often instituted on patents that have already survived district court review, ex parte reexamination proceedings, or both, and are invalidated at roughly the same rate as all other petitions: 83%. Dolin 927-28. Making matters worse, IPRs are initiated most often against product-producing companies, rather than the non-practicing entities that include the "trolls."[12] And the invalidity rates are roughly the same for each type of patent holder. *Ibid.*

Thus, an IPR procedure ostensibly designed to

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[10] U.S. Patent & Trademark Office, *Patent Trial and Appeal Board Statistics* 2, 10 (Apr. 20, 2016), <http://1.usa.gov/24KQcLw>.

[11] 35 U.S.C. § 282(b); *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1285 (Fed. Cir. 2011) (en banc) (noting the defense of "[i]nequitable conduct").

[12] Brian J. Love & Shawn Ambwani, Inter Partes *Review: An Early Look at the Numbers*, 81 U. Chi. L. Rev. Dialogue 83, 103 (2014).

target "patent trolls" has instead introduced uncertainty into the validity of all patents. And a procedure that Congress had no power to enact will often invalidate a patent when district court litigation would uphold it. This result is intolerable, and has a dramatic impact on the entire body of issued patents, the future of patent law, and the best system for innovation in the world.

3. Inter partes review proceedings are costly to defend and time-consuming.

IPR procedures also impose administrative burdens on patentholders that undermine patent property rights. IPR proceedings take a long time—anticipating a process easily taking 3 years, including the time spent at the petition stage, 35 U.S.C. § 314(b); the time (up to 18 months) allowed after review is instituted, 37 C.F.R. § 42.100(c), and the time for an appeal, 35 U.S.C. § 141(c).[13]

Many challenged patents will be subjected to multiple IPR petitions, on different grounds of alleged invalidity, making IPR proceedings lasting five years or longer likely. *Torpedoing Patent Rights*, *supra* note 13. Because most litigation in district court will be stayed for the duration of an IPR proceeding, *id.* § 315(a)(2), a patent is effectively unenforceable during that period, eating years off the 20-year life of a

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[13] *See* Judge Paul Michel, *Torpedoing Patent Rights*, IPWatchdog Blog (July 10, 2011), http://bit.ly/1qW5z3y (Torpedoing Patent Rights); Gene Quinn, *Judge Michel says Congress stuck in a time warp on patent reform*, IPWatchdog Blog (May 12, 2015), <http://bit.ly/1JbVoxX>.

patent—a large portion of which will have already elapsed even before the patent is granted, *id.* § 154(a)(2). These delays also add time and expense that deprive investors and inventors of chances to recoup their investments.

The power to stay litigation through IPR proceedings also encourages further abuse. Parties can institute proceedings after being sued in court to delay being held liable for damages, to increase their settlement leverage, to retaliate against the patentholder,[14] or to play out the clock on the patent's life. Indeed, the overwhelming majority—83%—of IPR petitions have been filed against patents that have also been asserted in litigation.[15]

IPR proceedings are also expensive. Surveys indicate that IPR campaigns cost upwards of $500,000. *Ibid.* A single party may have to endure this expense over and over in serial IPR proceedings over a single patent. These administrative costs and uncertainty of IPR review have "significantly depressed"[16] the transactional value of patents—both

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[14] Gary Lauder, *Venture Capital: "The Buck Stops Where?"*, 2 Med. Innovation & Bus. 14, 18 (2010), http://bit.ly/1VpfBHr ("*Venture Capital*").

[15] *IPRs: Reality Amid the Pyrotechnics*, RPX Blog (July 2, 2015), <http://bit.ly/25tFIzJ>.

[16] Jack Lu, IP Mkt. Advisory Partners, *Patent Portfolio Valuation as Reflected by Market Transactions: Market Dynamics and the Impact of AIA and* Alice 149 (Sept. 2015), <http://bit.ly/1sWuAh2>.

good and bad. In the two years after the institution of IPR, the gross value of patent sales was down 83%,[17] contributing a net $1 trillion loss to the U.S. economy.[18]

4. The problems of inter partes review contribute to an environment of hostility toward patent ownership.

The problems caused by IPR are compounded by the fact that it is only the most recent in a series of efforts over the last decade that have rapidly eroded patent rights. Patents can now more readily be invalidated for claiming "abstract ideas," or for indefiniteness in their terms. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014); *Nautilus, Inc. v. Biosig Instruments*, 134 S. Ct. 2120, 2124 (2014). And it is now harder for patentholders to enforce their "right to exclude others" from using a patented invention, 35 U.S.C. § 261, through injunctive relief, *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 392-94 (2006).

Congress's previous attempts at patent reform, including the creation of inter partes reexamination in 1999, *see* the American Inventors Protection Act of

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[17] Gene Quinn, *Is the Patent Market Poised for Rebound in 2015?*, IPWatchdog Blog (Dec. 11, 2014), <http://bit.ly/1usZqrl> (utilizing estimates provided by Richard Baker, an intellectual-property-licensing expert).

[18] Richard Baker, *America Invents Act Costs the U.S. Economy over $1 Trillion,* Patently-O Blog (June 8, 2015), <http://bit.ly/1Udw5wV>.

1999, Pub. L. No. 106-113, §§ 4601-4608, 113 Stat. 1501 (1999), have imposed their own costs and sapped resources that would have otherwise been devoted to granting patents, so that the average wait-time for a patent is between three and four years.[19]

Indeed, the AIA's supposed reforms aside from IPR have also made the process of obtaining a patent more risky and expensive. The AIA introduced provisions making it harder to join infringers in a single proceeding, increasing the expense of enforcing patents. 35 U.S.C. § 299. Congress has also chosen to shift to a "first-to-file" patent approval system—which awards the patent to the first one to submit an application, *id.* § 102(a)(2), replacing the old "first-to-invent" rule, which awarded the patent to the one who could prove having invented it first.

The AIA also weakens the one-year "grace period," which formerly permitted inventors to disclose, use, discuss, or even sell their inventions for up to one year prior to applying for a patent without those actions causing the invention itself to be deemed "prior art" that would invalidate the patent. After the AIA, *any* public use or offer to sell an invention (even if the functioning of it is not disclosed) becomes an immediate bar on patenting, *id.* § 102(b)(1). These changes collectively make it harder for inventors to collaborate in developing their inventions, force them

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[19] Dennis Crouch, *Average Patent Application Pendency*, Patently-O Blog (Dec. 12, 2011), <http://bit.ly/1XZFQVs> (utilizing statistics from the U.S. PTO's Performance and Accountability Reports).

to rush development to get a patent on file, and could make it easier for competitors to steal inventions. The effects of these changes have yet not been felt, as the validity of patents issued under this new patenting regime are only now starting to be tested.

B. The devaluation of patent rights introduced by inter partes review harms the American innovation economy.

Patent-driven innovations from startups and individual inventors have nourished much of the creative disruption that has fueled innovation and the American economy, spurring developments in industries as diverse as computer software, semiconductors, online businesses, life sciences, and emerging clean technologies. Nat'l Venture Capital Ass'n, *Venture Impact: The Economic Importance of Venture-Backed Companies to the U.S. Economy* 9-10 (5th ed. 2009), <http://bit.ly/1X8wBmZ>. But the risk, uncertainty, and expense attending patent rights as the result of the existence of IPR has imperiled the availability of capital for new businesses and has thereby harmed the American economy as a whole.

1. The risk and expense associated with inter partes review proceedings impedes inventors, startups, and small businesses.

The changes over the last decade to the patent system have greatly discouraged individual inventors from patenting their inventions. Over the period 1995 to 2009, the share of patents going to small firms and

individuals declined by a third.[20] The additional burden, expense and uncertainty introduced through IPR make patents even less attractive to inventors.

The problems of IPR review are further exacerbated by the AIA's other accompanying changes to the patent system, including the joinder rule, the change to the first-to-file rule, and the new restrictions on the pre-application grace period. These add further expense to development of patentable inventions, which favors resource-rich incumbents, and discourages the natural openness inventors need to thrive—to collaborate with colleagues, attract investors, and test the market for the products that will practice their patents. As a result of these collective effects, great ideas that are only economically viable under patent protection will be left on the drafting table, never to get to market. Indeed, this may be one of the reasons that the number of patents issued in 2015 fell overall for the first time since 2007.[21]

The impact of IPR review goes way beyond its immediate effects on the decision-making of inventors themselves, however. The threat of IPR, and the attendant instability it introduces into otherwise settled patent property rights, will make it harder for startups to attract investors, employees, and many

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[20] Scott Shane, *Patents Granted to Small Entities in Decline*, Small Bus. Trends (July 19, 2010), < http://bit.ly/1UoNVzX>.

[21] U.S. Patent & Trademark Office, *U.S. Patent Statistics Chart Calendar Years 1963 – 2015*, <http://1.usa.gov/1iTfZsb>.

other critical resources.

Turning an idea into a product—including developing the idea, patenting it, testing it, debugging it, building prototypes, scaling it into a product, and then building production facilities, distribution channels, and a marketing apparatus to support it—all these steps are costly. The initial investment required to bring innovative ideas to market is particularly high for high-tech products in industries like clean energy and life sciences, frequently reaching into the billions.[22]

Where such technology is developed by a start-up company, with no revenues to invest and no assets against which to borrow, it would be impossible to attract the investment necessary to develop an innovative product without convincing investors that the enterprise was viable. In many cases, a new company's only chance of success lies in the protection that a patent affords to the company's new technology.

Patents are thus critical to the growth and viability of innovation-oriented start-ups whose inventions might otherwise easily be copied. A system of durable, stable, and cheaply obtained patent rights enables startups to connect to critical capital resources. A

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[22] Tufts Ctr. for the Study of Drug Dev., *Cost to Develop and Win Marketing Approval for a New Drug Is $2.6 Billion* (Nov. 18, 2014), <http://bit.ly/1Hfvx6G>; *Climate for Innovation: Hr'g Before H. Select Comm. on Energy Independence and Global Warming*, 111th Cong. 31, 33 (2009) (testimony of Robert T. Nelsen, ARCH Venture Partners).

patent can be used as leverage, either as security for loans or through licensing, because it ensures that the innovative concept embodied in an invention will survive even if the business itself proves unsuccessful. Patents thus set startups on a growth path, through which they can expand, create jobs, and generate further innovations.[23] Adding to their durability, patents can be sold and collateralized, further ensuring the availability of stable funding sources, thereby contributing an estimated $80 billion in annual growth to the U.S. economy.[24]

Patents also help to level the playing field for individual inventors, startups, and small companies, enabling them to compete against more-established companies. These larger companies enjoy all the benefits of incumbency, including better marketing networks, manufacturing facilities, economies of scale and name recognition that creates customer confidence and loyalty, which those companies will employ to prevent the "creative destruction" that so benefits the economy but harms their vested interests.[25] These advantages, and the competition-

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[23] J. Farre-Mensa et al., USPTO, Office of the Chief Economist, *The Bright Side of Patents* 3, 6 (USPTO Working Paper No. 2015-2, Jan. 2016), <http://bit.ly/1N34XNk>.

[24] Robert Litan & Hal Singer, Economists Inc., *Unlocking Patents: Costs of Failure, Benefits of Success* 18, <http://bit.ly/1U6tXY6>.

[25] *See Patent Reform Impact on Small Venture-Backed Companies: Hearing Before the H. Small Bus. Comm.*, 110th

destroying ends to which they can be employed, are often difficult to overcome unless the startup has patents protecting its key innovations. It is thus unsurprising that the likelihood of growth for start-up firms is 35 times greater for those that avail themselves of the patent system.[26] Patents also more than double the probability that a startup will grow to sufficient size to be listed on a stock exchange. Farre-Mensa *supra* note 23 at 5.

But the value of a patent depends almost entirely on its validity—the "determinative" factor in whether it will attract funding.[27] Providing venture capital for start-ups is inherently risky, because three out of four startups will fail.[28] Thus, the attendant uncertainty as to patent validity introduced by the creation of IPR substantially weakens patents' value in the eyes of angel investors and venture capitalists, with devastating effects on the availability of capital for startup businesses. This is not speculation. It has been the personal experience of *amici*, who have had businesses destroyed because the mere *existence* of IPR made patent rights so uncertain that funding

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Cong. 98 (2007) (testimony of John Neis, Venture Investors).

[26] C. Fazio et al., MIT Innovation Initiative, *A New View of the Skew: A Quantitative Assessment of the Quality of American Entrepreneurship* 9 (2016), <http://bit.ly/1X8MF8r>.

[27] Press Release, Nat'l Venture Capital Ass'n, National Venture Capital Association Encourages Congress to Support Innovators in Patent Reform Legislation 1 (Oct. 25, 2007).

[28] Deborah Gage, *The Venture Capital Secret: 3 Out of 4 Start-ups Fail*, Wall St. J., Sept. 20, 2012, <http://on.wsj.com/1FpKaG6>.

became impossible—even though IPR petitions were never filed against the patents at issue.

A patent under IPR can be held up for years. During that process, it is unlikely to attract investment, and even the threat of such review could cause investors to turn elsewhere. *See* Farre-Mensa *supra* note 23 at 25. Indeed, the institution of an IPR proceeding can disrupt the development of ventures that have already gotten funding, by making it harder to attract the second or third rounds of investment necessary to survive, each of which require greater investments from increasingly risk-adverse investors. *Venture Capital supra* note 14.

Moreover, the potential for IPR review to weaken property rights saps patentholders of their chance to compete on level footing with more-established rivals. Indeed, larger companies, with their greater resources to devote to litigation, will find IPR proceedings to be particularly effective anti-competitive weapons. The ability to weaken patent rights through administrative challenges to competitors' patents makes it easier for them to destroy smaller companies, and leaves them free to copy patented technologies without serious risk of suffering legal consequences.[29] It is thus unsurprising that large companies led the push for the AIA's patent reforms and the creation of

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[29] Joe Nocera, *the Patent Troll Smokescreen*, N.Y. Times, Oct. 23, 2015, <http://nyti.ms/1PJRz7j> (outlining the business strategy of "'efficient infringing'").

IPR.[30]

2. These threats to innovators are harming the American economy as a whole.

IPR's destabilizing effects on patent rights and the development of small and start-up businesses threaten the economy as a whole, because growth in the American economy depends on advances from small startups supported by strong patent rights. The small businesses in the SBA's "Small Business Innovation Research Program" alone have received almost 120,000 patents.[31] Aside from the life-enhancing innovations small businesses provide, they also create over 63% of all private sector jobs,[32] and employ over 37% of all scientists and engineers.[33] At present, net job growth in the U.S. is attributable entirely to jobs created by small startup firms, because companies that are more than one year old actually destroy, on average, more jobs than they create.[34]

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[30] E.g., CQ Press, *First Street Report: Lobbying the America Invents Act* 4, 11-12 (2011), <http://bit.ly/24fgdjg> (noting that the "Coalition for 21st Century Patent Reforms," made up entirely of large companies, "actively lobbied" for enactment of the AIA).

[31] http://www.inknowvation.com/sbir/sbir-stats.

[32] Small Bus. Admin., Off. of Advocacy, *Frequently Asked Questions* 1, <http://1.usa.gov/1y1jgOO>.

[33] Nat'l Sci. Bd., Nat'l Sci. Found., *Science and Engineering Indicators*, fig. 3-12 (2016), <http://1.usa.gov/1m7gkxG>.

[34] Ewing Marion Kauffman Found., *The Importance of Startups in Job Creation and Job Destruction* 4 (Jul. 2010),

Innovative industries also create jobs that pay approximately 60 percent more than non-IP-intensive industries, and their products drive the majority of U.S. exports.[35] Patent-ownership was found to be the leading indicator of regional wealth, more important than education or infrastructure.[36]

Recently, however, the startup and small-business environment has begun to suffer, in no small part due to the weakening of patent property rights. Since the 1990s, the number of technology-related startups is down nearly 40%.[37] For the first time, more companies are going out of business than starting up.[38] The creation of IPR, and the cloud that it casts over the validity of patents, risks tilting the balance still further, inhibiting startup growth and innovation, and depriving the economy of good, high-paying jobs.

<http://bit.ly/1eODvIy>.

[35] Nam D. Pham, NDP Consulting, *The Impact of Innovation and the Role of Intellectual Property Rights on U.S. Productivity, Competitiveness, Jobs, Wages, and Exports* 5 (2010), <http://bit.ly/1Z8MGGv>.

[36] Fed. Reserve Bank of Cleveland, Ann. Rep., *Altered States: A Perspective on 75 Years of State Income Growth* 17-18 & fig. 6 (2005), <http://bit.ly/1RDNkG7>.

[37] J. Haltiwanger et al., Ewing Marion Kauffman Found., *Declining Business Dynamism in the U.S. High-Technology Sector* 7 (Feb. 2014), <http://bit.ly/1OWNUPp>.

[38] J.D. Harrison, *More businesses are closing than starting. Can Congress help turn that around?*, Wash. Post, Sept. 17, 2014, <http://wapo.st/1Parrns>.

Further, the ill effects of IPR review, and the AIA as a whole, have only begun to manifest themselves in the four years since its enactment. Over the long run, the harms to innovation introduced by IPR review, and their effects on the economy, are likely to greatly increase. Indeed, many countries that have created post-grant proceedings similar to IPR have found these administrative processes to be unworkable, and are changing their systems to operate more like ours did. For instance, Japan, China, and South Korea once adopted post-grant procedures like IPR, and each of these countries discarded the process within a decade.[39] This data shows that in the long run, instead of being a more cost-effective alternative to litigation, IPR will likely encourage more patent challenges, consume greater USPTO resources, at ever-increasing expense, until their drain on resources makes them completely unworkable.

The evidence from other countries further demonstrates that the AIA's other provisions will be a net loss for this country's innovators. For instance, Canada changed to a first-to-file system in 1989, and studies have concluded that that it was bad for small companies and individual inventors. The expense and difficulty of rushing to file patents has led to declines in individual patent ownership in Canada that are four times worse than the losses in the United

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[39] Dale L. Carson, *Patent reform: One giant step backwards*, Nat'l Law J., Aug. 31, 2011, <http://bit.ly/24fjKxS>.

States.[40] These difficulties have also made the environment so unfavorable for startups that "long-term returns in the Canadian venture capital industry are such that capital has fled the market."[41]

II. This Case Presents The Best Vehicle to Resolve This Important Question.

Finally, there are a variety of reasons the Court should use this case as the vehicle to decide the important question of the constitutionality of IPR proceedings. First, as Petitioner mentioned, this case's importance follows naturally from the Court's grant of certiorari in *Cuozzo Speed Technologies, LLC v. Lee*, No. 15-446, as this case raises more fundamental issues regarding the same subject. This case's importance is reflected even more directly from the certiorari grant in *Lockwood*, No. 94-1660, which raised a virtually identical issue. Further, the time is right to consider this issue, as the constitutional infirmities of IPR will only worsen over time. Future patent reform efforts are on the horizon, and intervention now could thus prevent future legislation from being built upon the same faulty assumptions Congress labored under in creating IPR.

Second, this petition presents a superior vehicle to decide this issue than *Cooper v. Lee*, No. 15-955. Not

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[40] David S. Abrams & R. Polk Wagner, *Poisoning the Next Apple? The America Invents Act and Individual Inventors*, 65 Stan. L. Rev. 517, 517-18 (2013).

[41] BDC, *Venture Capital Industry Review* 6 (Feb. 2011), <http://bit.ly/1OWOLQ8>.

only is this petition the only one that will allow the Court to resolve the closely interrelated Article III and Seventh Amendment issues together, it is also the only petition that has not been hampered by ill-conceived attempts to narrow the issues, which would leave the IPR regime intact, but treat its results as non-binding. That resolution would prove unsatisfactory, because it would not address any of the features of IPR review that make it so costly, disruptive, and slanted against innovators in favor of incumbents. If the petitioner in *Cooper* were to carry the day, patentholders would be forced to endure the same expensive, lengthy and disruptive IPR review proceedings they do now. The only difference would be that the exercise would be entirely pointless. It would thus be far better for the Court to take this case, to ensure that patents are restored to their proper place as constitutionally protected property interests, and to see that IPR is properly and permanently discarded.

CONCLUSION

The petition should be granted and the judgment of the court of appeals should be reversed.

Respectfully submitted,

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APPENDIX

APPENDIX

Gary Lauder is the Managing Director of Lauder Partners LLC, a Silicon Valley-based venture capital firm. He has been a venture capitalist since 1985, investing in over 80 private companies, and serving on many of their boards. As Chairman of 2 companies in the past 4 years, he has been forced to defend against 4 "patent troll" actions, and has been a patent plaintiff once in his career.

Paul Morinville is an inventor and entrepreneur with 9 issued patents and approximately 20 pending patent applications. Paul is a former Human Resources executive at Dell, Inc and Founder of OrgStructure, LLC, a seed-stage enterprise middleware software provider.

Robert N. Schmidt is the founder and chairman of six technology-based firms in Cleveland, OH. He is a patent attorney, professional engineer, and an inventor on 31 US Patents, and his firms control more than 150 patent assets.

Arch Venture Partners is a premier provider of seed and early stage venture capital for technology firms, with a special competence in co-founding and building firms from start-up. Our mission is to deliver promising technologies from the earliest stages to successful commercial application – from concept to commerce. With a 30 year history and $2 billion in capital under management, ARCH has secured its place among the largest providers of seed and early stage capital in the U.S.

The National Small Business Association is the nation's oldest small-business advocacy organization, with over 65,000 members representing every sector and industry of the U.S. economy. It is a nonpartisan organization devoted solely to representing the interests of the small businesses, which provide almost half of private sector jobs to the economy.

The Small Business Technology Council advocates for the 6,000 currently active, highly inventive firms that participate in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

The National Innovation Association is a non-profit association of inventors, makers, entrepreneurs and startups providing networking, information and connections to buyers, manufacturers, prototypers, and other professionals in the innovation ecosystem.

The United Inventors Association is a non-profit educational foundation with over 15,000 members dedicated to providing educational resources and opportunities to the independent inventing community, while encouraging honest and ethical business practices among industry service providers.

US Inventor, Inc. is a non-profit education and advocacy organization with approximately 7,000 members advocating for strong patent rights in Washington D.C. and across the country.

Independent Inventors of America is a non-profit organization providing educational resources to inventors.

American Inventors for Justice is a non-profit

inventor advocacy organization advocating for strong patent rights in Congress and elsewhere.

Houston Young Inventors Showcase was founded in 1984 in Houston, Texas, and is a leading not-for-profit organization dedicated to the promotion and development of innovation and entrepreneurship among grade school children. It holds invention competitions, teaching entrepreneurship and inspiring students to take ownership of their futures.

Edison Innovators Association, **Minnesota Inventors Network**, **Texas Inventors Association**, **Southern Florida Inventors Society**, **Tampa Bay Inventors Council**, **Houston Inventors Association**, and **San Diego Inventors Forum** are local non-profit inventor organizations providing direct support, education, networking and other opportunities to independent inventors and patent centric startups.