

No. 10-290

IN THE
Supreme Court of the United States

MICROSOFT CORPORATION,

Petitioner,

v.

i4i LIMITED PARTNERSHIP AND
INFRASTRUCTURE FOR INFORMATION INC.,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE FEDERAL CIRCUIT

**BRIEF OF THE BOSTON PATENT LAW
ASSOCIATION AS *AMICUS CURIAE*
IN SUPPORT OF RESPONDENTS
ON THE MERITS**

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TABLE OF CONTENTS

	<i>Page</i>
TABLE OF AUTHORITIES	iii
INTEREST OF <i>AMICUS CURIAE</i>	1
SUMMARY OF ARGUMENT	1
ARGUMENT.....	6
I. PATENTS PROMOTE INNOVATION AND BENEFIT SOCIETY	6
A. Patents Foster Innovation.....	8
B. Patents Attract Investment	10
C. Patents Prevent Free Riders.....	15
II. PATENTS ARE GENERALLY SOUND; THUS, THERE IS NO DIRE NEED FOR LOWERING THE STANDARD OF PROOF FOR CHALLENGING PATENTS.....	18
A. The USPTO Issues Quality Patents	19

B. Reexaminations Confirm That Patents Are Sound	23
III. TILTING THE SCALES TOWARDS INFRINGERS WEAKENS PATENTS AND IN TURN, INHIBITS PROGRESS.....	25
A. Death by a Thousand Cuts	26
B. Without Strong Patents, Innovation Will Decline	29
CONCLUSION	33

TABLE OF AUTHORITIES

CASES

	<i>Page(s)</i>
<i>02 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.,</i> 521 F.3d 1351 (Fed. Cir. 2008).....	26
<i>American Hoist & Derrick Co. v. v. Sowa & Sons, Inc.,</i> 725 F.2d 1350 (Fed. Cir. 1984).....	18
<i>Aronson v. Quick Point Pencil Co.,</i> 440 U.S. 257 (1979).....	8
<i>Cybor Corp. v. FAS Techs.,</i> 138 F.3d 1448 (Fed. Cir. 1998).....	26
<i>Diamond Scientific Co. v. Ambico, Inc.,</i> 848 F.2d 1220 (Fed. Cir. 1988)	32
<i>Fresenius USA, Inc. v. Baxter Int’l, Inc.,</i> 582 F.3d 1288 (Fed. Cir. 2009).....	28, 29
<i>Hilton Davis Chem. Co. v. Warner-Jenkinson Co. Inc.,</i> 62 F.3d 1512 (Fed. Cir. 1995), rev’d, 520 U.S. 17 (1997)	31
<i>Hockerson-Habestadt, Inc. v. Converse Inc.,</i> 183 F.3d 1369 (Fed. Cir. 1999)	26

<i>Jungersen v. Ostby & Barton Co.</i> , 335 U.S. 560 (1949).....	2
<i>KCJ Corp. v. Kinetic Concepts, Inc.</i> , 223 F.3d 1351 (Fed. Cir. 2000).....	26
<i>Kewanee Oil Co. v. Bicron Corp.</i> , 416 U.S. 470 (1974).....	12-13, 29
<i>KSR Int'l Co. v. Teleflex, Inc.</i> , 550 U.S. 398 (2007).....	27
<i>Ortho-McNeil Pharm. Inc.</i> <i>v. Mylan Labs. Inc.</i> , 520 F.3d 1358 (Fed. Cir. 2008)	26
<i>Patlex Corp. v. Mossinghoff</i> , 758 F.2d 594 (Fed. Cir.) <i>modified</i> , 771 F.2d 480 (Fed. Cir. 1985)	13
<i>Picard v. United Aircraft Corp.</i> , 128 F.2d 632 (2d Cir. 1942)	11, 17-18
<i>Pfizer, Inc. v. Apotex, Inc.</i> , 480 F.3d 1348 (Fed. Cir. 2007).....	18
<i>Renishaw PLC v. Marposs Societa'</i> <i>Per Azioni</i> , 158 F.3d 1243 (Fed. Cir. 1998)	26
<i>Schumer v. Lab. Computer Sys. Inc.</i> , 308 F.3d 1304 (Fed. Cir. 2002).....	26
<i>Yarway Corp. v. Eur-Control USA, Inc.</i> , 775 F.2d 268 (Fed. Cir. 1985)	17

STATUTES, CODES & RULES

	<i>Page(s)</i>
U.S. Const., art. I, §8, cl. 8	12
35 U.S.C. § 154(a)	12
35 U.S.C. § 282.....	18
35 U.S.C. § 301 <i>et seq.</i>	23
35 U.S.C. § 303(a)	24
35 U.S.C. § 102(a)	27
35 U.S.C. § 102(b)	27
35 U.S.C. § 103.....	27
35 U.S.C. § 112.....	27

OTHER AUTHORITIES

	<i>Page(s)</i>
Reed Albergotti, <i>The Most Inventive Towns in America</i> , Wall St. J., July 22, 2006.....	31
Andrew Bekerman-Rodau, <i>Patents Are Property: A Fundamental but Important Concept</i> , 4 J. of Bus. & Tech. L. 87 (2009)	8-9, 14, 29-30
Mark Blaxill & Ralph Eckardt, <i>The invisible Edge: Taking Your strategy to the Next Level Using Intellectual Property</i> (2009)	18, 30

Dan L. Burk, <i>Biotechnology and Patent Law: Fitting Innovation to the Procrustean Bed</i> , 17 Rutgers Computer & Tech. L. J. 1 (1992)	13
Henry Grabowski, Patents, <i>Innovation and Access to New Pharmaceuticals</i> , 5 J. Int'l Econ. L. 849 (2002).....	13, 14
Neil E. Graham, <i>Perception Gap Hindering Efforts to Improve Patent System, Dudas Says</i> , 71 Pat. Trademark & Copyright J. 374 (2006).....	19
Stuart J. Graham et al., <i>Post-Issue Patent "Quality Control": A Comparative Study of US Patent Reexamination and European Patent Oppositions</i> , 34 (2002) available at http://escholarship.org/uc/item/8bs830w9#page-1 (last visited Mar. 16, 2011).....	24-25
Larry J. Guffey, <i>Business Method Patents: What They Are--Why Clients and Service Providers Should Care</i> , 33 Md. B.J. July/Aug. 2000 25 (2000).....	21-22, 22
David J. Kappos, <i>Building Bridges and Making Connections Across the IP System</i> , 20 Federal Cir. Bar J. 273 (2010).....	29
F. Scott Kieff, <i>Facilitating Scientific Research: Intellectual Property Rights and the Norms of Science--A Response to Rai and Eisenberg</i> , 95 Nw. U. L. Rev. 691 (2001)	10, 13, 31

Edmund W. Kitch, <i>The Nature and Function of the Patent System</i> , 20 J. L. & Econ. 265 (1977).....	10
Yusing Ko, <i>An Economic Analysis of Biotechnology Patent Protection</i> , 102 Yale L.J. 777 (1992).....	13, 15, 16
Corinne Langinier & GianCarlo Moschini, <i>The Economics of Patent: An Overview</i> , available at www.card.iastate.edu/publications/dbs/pdffiles/02wp293.pdf (last visited March 16, 2011).....	9-10
Mark A. Lemley, <i>The Economics of Improvement in Intellectual Property Law</i> , 75 Tex. L. Rev. 989 (1997).....	9, 11-12
Ronald J. Mann, <i>The Role of Patents in Venture-Backed Software Start-Ups</i> , Acad. Advisory Council Bulletin (2007) available at www.pff.org/issues-pubs/ip/bulletins/bulletin2.1softwareventurepatents.pdf (last visited March 14, 2011)	14
Erik S. Maurer, Note, <i>An Economic Justification for a Broad Interpretation of Patentable Subject Matter</i> , 95 Nw. U.L. Rev. 1057 (2001).....	15
Ali Mojibi, <i>An Empirical Study of the Effect of KSR v. Teleflex on the Federal Circuit's Patent Validity Jurisprudence</i> , 20.3 ALB. L.J. SCI. & Tech. 101 (2010).....	27

Percentage of Patents That Were Initially Rejected, <i>available at</i> http://www.patentlyo.com/patent/2009/04/percentage-of-patents-that-were-initially-rejected.html (last visited Mar. 3, 2011).....	21, 22
Giles S. Rich, <i>The Principles of Patentability</i> , 42 J. Pat. Off. Soc’y 75 (1960).....	10
Giles S. Rich, <i>The Relation Between Patent Practices and the Anti-Monopoly Laws</i> , 24 J. Pat. Off. Soc’y 159 (1942)	9, 15, 17
William Rosen, <i>The Most Powerful Idea in the World</i> (2010).....	6, 7-8
Bradford L. Smith & Susan O. Mann, <i>Innovation and Intellectual Property Protection in the Software Industry: An Emerging Role for Patents?</i> , 71 U. Chi. L. Rev. 241 (2004)	15-16
David Silverstein, <i>Patents, Science and Innovation: Historical Linkages and Implications for Global Technological Competitiveness</i> , 17 Rutgers Computer & Tech. L.J. 261 (1991)	8, 30, 31
Lawrence A. Stahl & Robert H. Fischer, <i>The Value of Patents to Technology Driven Companies</i> , 22 Intell. Prop. & Tech. L.J. 27 (2010).....	11, 16
Mark Twain, <i>A Connecticut Yankee in King Arthur’s Court Chapter IX</i> (1889).....	5

US Pat. & Trademark Office, Data Visualization Center <i>available at</i> http://www.uspto.gov/dashboards/patents/main.dashxml (last visited Mar. 16, 2011).....	21
US Pat. & Trademark Office, Ex Parte Reexamination Filing Data as of December 31, 2010, <i>available at</i> http://www.uspto.gov/patents/stats/Reexamination_information.jsp (last visited Mar. 15, 2011).....	24, 25, 28
US Pat. & Trademark Office, Financial and Performance Highlights, <i>available at</i> http://www.uspto.gov/about/stratplan/ar/2006/100_summary.jsp (last visited Mar. 5, 2011).....	23
US Pat. & Trademark Office, US Patent Statistics Chart Calendar Years 1963-2010 <i>available at</i> http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last visited Mar. 10, 2011).....	19, 20
Andrew T. Zidel, <i>Patent Claim Construction in the Trial Courts: A Study Showing the Need for Clear Guidance from the Federal Circuit</i> , 33 Seton Hall L. Rev. 711 (2003)	21

INTEREST OF *AMICUS CURIAE*

The Boston Patent Law Association (“BPLA”) is a nonprofit association of intellectual property professionals who serve a broad range of clients that rely on the patent system, such as individual inventors, companies large and small, investors, and research universities, to name a few. These clients operate in an equally broad range of industries, including life sciences, software, “high tech,” and traditional manufacturing. The BPLA is concerned that lowering the standard of proof for overcoming the statutory presumption of validity will undermine the public’s confidence in patents. That lack of confidence will discourage investment in new business and new technologies, leading to a decline in innovation, competition, and the nation’s economic prosperity generally.¹

SUMMARY OF ARGUMENT

Perceiving an anti-patent bias of the court system in the 1940s, Justice Jackson observed that though *some* patents may be of questionable validity, that does not mean that *all* patents should be invalidated:

¹ Pursuant to Supreme Court Rule 37, no party, its counsel, or any third party authored, funded, or otherwise contributed any part of this brief. This brief is solely the work of the BPLA and reflects its consensus view but not necessarily the view of any individual member or client. The BPLA’s counsel in this matter, McCarter & English LLP, contributed its time in preparing this brief *pro bono*. The parties have lodged with this Court blanket consent letters agreeing to participation by all *amici*.

It would not be difficult to cite many instances of patents that have been granted, improperly I think, and without adequate tests of invention by the Patent Office. But I doubt that the remedy for such Patent Office passion for granting patents is an equally strong passion in this Court for striking them down so that the only patent that is valid is one which this Court has not been able to get its hands on.

Jungersen v. Ostby & Barton Co., 335 U.S. 560, 572 (1949) (dissenting opinion).

Just as Justice Jackson questioned the wisdom of invalidating all patents based on the improvident grant of a few, the BPLA questions the need for eviscerating the clear and convincing standard simply because one willful infringer, Microsoft, failed to prove invalidity of one patent in one case. Indeed, Microsoft's challenge has far broader implications than the validity of just one patent. The BPLA views Microsoft's appeal as an attack, not just on i4i's patent, but rather on all patents.

This attack is myopic--it fails to understand the role of patents, whether valid or not, in the broader scheme of the nation's economy. The vista from Microsoft's windows, apparently, is that all patents are bad and stifle competition. Contrary to that view, however, patents--even those ultimately found to be invalid--do not stifle innovation or unfairly limit competition. If anything, free riders

(*i.e.*, patent infringers and other copyists) stifle innovation and weaken competition. More than any other single factor, patents encourage innovation, competition, and access to new technologies.

Lowering the standard of proof required for challenging patent validity will make patents less attractive to industry, which, in turn, will deter innovation and commercialization of new products. Indeed, one of the first questions a venture capitalist or other investor asks before funding a start-up or promising new technology is “what is the patent position?” That is, industry will not risk investment in new technologies unless it can be assured that its investments will be protected by the market exclusivity that patents provide.

Keeping the standard for invalidating patents high helps to give patents the “teeth” they need to serve this purpose of attracting investment in innovation. Innovators need the assurance that patents will deter free riding and stand up in court. Lowering the standard, however, will lead to more uncertainty as to the strength and enforceability of patents, including in particular their use in stopping those who would rather copy than innovate. That uncertainty will devalue patents, making them less attractive to inventors and investors alike. The end result of this downward spiral will be a decline in innovation and competition.

Accordingly, given the importance of patents to society, and given the importance of instilling

public confidence in the enforceability of patents, the BPLA presents three policy reasons for maintaining the current clear and convincing standard.

First, patents promote innovation, competition, and wide access to new technologies. Without such protection, investments in innovation are subject to the “free-rider” problem in which copyists can take advantage of the pioneering work of others. Free riding, in turn, stifles innovation by frustrating the exchange of information and by devaluing incentives for innovation. Maintaining the clear and convincing standard helps to bolster the strength of patents--particularly how patents are perceived in the marketplace--and to discourage copyists.

Second, neither Microsoft, its supporters, nor this Court should worry that there is a rash of poorly-examined, invalid patents and hence a need to lower the current standard for testing patent validity. The clear and convincing standard is based at least in part on the presumption that patents emerge from the United States Patent and Trademark Office (“USPTO”) well tested. That presumption is well-founded. USPTO patent examiners carefully vet patent applications and do their jobs well. While some patents are indeed improperly granted, there is no need to overcompensate for this minority of patents by lowering the standard of proof required for overturning them. Nor is there a need to overcompensate for those cases in which the USPTO did not consider all of the prior art

(sometimes obscure) uncovered by accused infringers during infringement litigation.

The USPTO is not in the business of granting invalid patents. Statistics reveal that patents are generally sound. In particular, the results of USPTO reexaminations show that even those patents that the USPTO granted without considering all relevant prior art still stand up to scrutiny. Reexaminations typically involve a challenge based on prior art not considered during the original examination. Even in such cases, however, patents are cancelled only about 12% of the time. That low rate suggests that USPTO examiners get it right more often than not, even when they have not considered all of the prior art. Indeed, in this day and age of Google and instant access to information via the Internet, it is unlikely that a patent examiner will miss the most pertinent prior art. When prior art was not found during the original examination of the patent, it often means that such prior art was less relevant than that cited and considered.

Third, as Mark Twain famously wrote, “a country without a patent office and good patent laws was just a crab and couldn’t travel anyway but sideways or backwards.” Mark Twain, *A Connecticut Yankee in King Arthur’s Court* Chapter IX (1889). Strong patents have allowed this country to move forward, to innovate, to compete on a global level. The clear and convincing evidence standard furthers this progress by, *inter alia*, fostering confidence in the value of patents. There are already too many ways for infringers to

challenge patents and delay or avoid enforcement. As such, enforcement of patents is becoming more costly and thus less attractive. Making it easier to challenge patents simply will encourage copyists to gamble on infringement rather than innovate on their own. Further, lowering the standard will cause American industry to perceive patents as weak. Economic and historical analysis reveals, however, that when patents are perceived as too costly to enforce or too easy to evade, innovation declines sharply. As innovation declines, so does the health and welfare of this country. Weakening the standard of proof, therefore, will force the country, like a crab, to walk backwards.

ARGUMENT

I. PATENTS PROMOTE INNOVATION AND BENEFIT SOCIETY

The historian and author William Rosen argues that the “single most powerful idea in the world”—which led first to the invention of the steam engine, then to the Industrial Revolution and its culture of sustained invention, and finally to America’s dominant, prosperous, and innovative economy—was not the discovery of some physical law or the invention of a particular gadget, but rather the idea that ideas themselves can be property subject to exclusive rights—*i.e.*, the patent. See William Rosen, *The Most Powerful Idea in the World* 324, 323-24 (2010). In his book, Rosen asks why the Industrial Revolution started in England and then expanded, exponentially, in the United States during the 18th and 19th

centuries, rather than in some other place and time renowned for creativity, such as ancient Greece or Renaissance Italy. The answer is that, unlike those societies, England and then the U.S. had an organized, legally-mandated patent system conducive not just to invention, but also to investment in and commercialization of inventions.

President Lincoln, who is the only U.S. president awarded a patent (No. 6469, entitled, “Buoying Vessels Over Shoals”), explained how the patent system stimulates innovation:

The advantageous use of Steam-power is, unquestionably, a modern discovery. And yet, as much as two thousand years ago, the power of steam was not only observed, but an ingenious toy was actually made and put in motion by it, at Alexandria in Egypt. What appears strange is that neither the inventor of the toy, nor any one else, for so long a time afterwards, should perceive that steam would move useful machinery as well as a toy . . . in the days before Edward Coke’s original Statute on Monopolies [the first patent law, enacted in 1624], any man could instantly use what another had invented; so that the inventor had no special advantage from his own invention. . . . The patent system changed this; secured to the inventor, for a limited time, the exclusive use

of his inventions; and thereby added the fuel of interest to the fire of genius, in the discovery and production of new and useful things.

The Most Powerful Idea in the World at 323-24 (quoting President Lincoln's speech entitled, "Discoveries, Inventions, and Improvements") (emphasis added); *see also, e.g.*, David Silverstein, *Patents, Science and Innovation: Historical Linkages and Implications for Global Technological Competitiveness*, 17 Rutgers Computer & Tech. L.J. 261, 263 (1991) ("the U.S. patent system has played a significant role in both stimulating innovation and promoting the commercialization of new technologies").

As discussed below, patents benefit society in at least three ways: by fostering the inventive process, by attracting investment in new technologies, and by encouraging competitors to innovate rather than copy.

A. Patents Foster Innovation

Patents foster innovation in several ways. First, the *quid pro quo* of the patent grant is disclosure. *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 262 (1979) ("patent law . . . promotes disclosure of inventions to stimulate further innovation and to permit the public to practice the invention once the patent expires"); Andrew Beckerman-Rodau, *Patents Are Property: A Fundamental But Important Concept*, 4 J. Bus. & Tech. L. 87, 90 (2009) (one "justification for patent law is the

increase in the public storehouse of knowledge that results from the public disclosure of patented inventions”). Newcomers can thus build on the store of knowledge created by earlier patent disclosures. Giles S. Rich, *The Relation Between Patent Practices and the Anti-Monopoly Laws*, 24 J. Pat. Off. Soc’y 159, 180 (1942). Without patents, however, inventors would tend to keep their inventions secret for fear of misappropriation:

But ideas (and writings, for that matter) are notoriously hard to control. Even if the idea is one that the creator can use herself, for example to boost productivity in her business, she will reap a reward from that idea only to the extent that her competitors do not find out about it. A creator who depends on secrecy for value therefore lives in constant peril of discovery and disclosure. Competitors may steal the idea, or learn of it from an ex-employee. . . . In all of these cases, the secrecy value of the idea will be irretrievably lost.

Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 Tex. L. Rev. 989, 994 (1997) (emphasis added).

Patents, however, allow and even facilitate the exchange of information without fear of misappropriation. Indeed, patents make the exchange of information--and thus the process of invention itself--more efficient. *See, e.g.*, Corinne

Langinier & GianCarlo Moschini, *The Economics of Patents: An Overview*, available at www.card.iastate.edu/publications/dbs/pdffiles/02wp293.pdf (last visited March 16, 2011) (noting that “patents avoid wasteful innovation efforts”); F. Scott Kieff, *Facilitating Scientific Research: Intellectual Property Rights and the Norms of Science—A Response to Rai and Eisenberg*, 95 Nw. U. L. Rev. 691, 701 (2001) (the patent system “is in fact a time-tested way to assure broad and ready access to proprietary information”) (citation omitted); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J. L. & Econ. 265, 276-77 (1977).

For example, upon review of another company’s patent, a competitor can avoid duplicating the patentee’s effort and can allocate R&D resources to a different project. Further, the competitor can avoid the mistakes of others. That is, many patents never result in commercial products. Later innovators, however, can review the library of patents in the relevant field and learn from past flops. Without a patent system, these failures would more likely remain unknown. *Id.* at 267-71; Giles S. Rich, *The Principles of Patentability*, 42 J. Pat. Off. Soc’y 75, 83 (1960) (“It should never be forgotten that *patented* inventions are published. . . . *Patents* on inventions that have failed can promote progress”).

B. Patents Attract Investment

Inventors may or may not be motivated by economic gain. Some may invent for glory. Some

out of academic curiosity. And some for altruistic reasons. The great insight of the patent system, however, is that even if a given inventor does not care about economic gain, the enterprise that would commercialize the invention most certainly does. An individual inventor may not be an industrialist with the resources to manufacture or promote his or her invention. A patent, however, allows the inventor to put the invention into the hands of a company that can. *Picard v. United Aircraft Corp.*, 128 F.2d 632, 642-43 (2d Cir. 1942) (“But if we never needed, or do not now need, patents as bait for inventors, we may still need them, in some instances, as a lure to investors”).

Industry will not invest in research and development or commercialization of products unless it can be assured of some degree of market exclusivity. Lawrence A. Stahl & Robert H. Fischer, *The Value of Patents to Technology Driven Companies*, 22 *Intell. Prop. & Tech. L.J.* 27, 29 (2010) (“The investors, be they shareholders, bondholders, or investment firms or banks, will demand protection for their investment. And one of the most visible ways to secure that protection is through patents”).

Professor Lemley, a noted intellectual property scholar at Stanford Law School, explains why investment in innovation would decline absent intellectual property protection:

To understand why the Framers thought exclusive rights in inventions and creations would promote the

public welfare, consider what would happen absent any sort of intellectual property protection. Invention and creation require the investment of resources--the time of an author or inventor, and often expenditures on facilities, prototypes, supplies, and the like. In a private market economy, individuals will not invest in invention or creation unless the expected return from doing so exceeds the cost of doing so--that is, unless they can reasonably expect to make a profit from the endeavor. To profit from a new idea or a work of authorship, the creator must be able either to sell it to others for a price, or to put it to some use which provides her with a comparative advantage in a market.

Lemley, *supra* at 994 (emphasis added). Patent law, of course, provides the “exclusive Right” to practice the patented invention for “limited Times” and thus fosters investment in innovation. *See* U.S. Const., art. I, § 8, cl. 8; *see also* 35 U.S.C. § 154(a) (a patent grants “the right to exclude others from making, using, offering for sale, or selling the inventions throughout the United States” during the limited term of the patent). *See also, e.g., Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480 (1974) (“The patent laws promote this progress by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time,

research, and development”); *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 599 (Fed. Cir.) (“encouragement of investment-based risk is the fundamental purpose of the patent grant, and is based directly on the right to exclude”), *modified*, 771 F.2d 480 (Fed. Cir. 1985).

Studies of the economically vibrant and innovative biotechnology and pharmaceutical industries confirm this analysis. In these sectors, a patent is the *sine qua non* for funding research and commercializing new products. See Dan L. Burk, *Biotechnology and Patent Law: Fitting Innovation to the Procrustean Bed*, 17 Rutgers Computer & Tech. L. J. 1, 22 (1991) (“one concrete fact is clear: patents are critical to the growth and competitiveness of American biotechnology because patents are something that investors expect”); Kieff, *supra* at 704 (“The ability for patents to bring immense amounts of, and diversity in, sources of funding and other resources to the basic biological research community is recognized as a critical factor in the great success the community has enjoyed since 1980”); Henry Grabowski, *Patents, Innovation and Access to New Pharmaceuticals*, 5 J. Int’l Econ. L. 849, 851-52 (2002) (patents are essential in the pharmaceutical industry to protecting the large investment it takes to bring a drug to market); Yusing Ko, *An Economic Analysis of Biotechnology Patent Protection*, 102 Yale L.J. 777, 800 (1992) (patents help biotech companies attract investment and thus increase innovation).

Although the debate over patent reform has often pitted the software and pharmaceutical industries against each other, scholars have found that the software industry also benefits from patents. *See* Ronald J. Mann, *The Role of Patents in Venture-Backed Software Start-Ups*, Acad Advisory Council Bulletin at 1, 5 (2007) (*available at* www.pff.org/issues-pubs/ip/bulletins/bulletin2.1softwareventurepatents.pdf (last visited March 14, 2011) (patents play a “role of considerable importance” for attracting investments in software start-up companies).

Of course, the end results of this investment in innovation are new and improved products. For example, without the investment that patents facilitate in the bio-pharma arena, life-saving new drugs and therapies would not be developed. *See, e.g.*, Grabowski, *supra.* at 851 n.6 (highlighting a study showing that “pharmaceutical R&D expenditures would be reduced by 64% in the absence of patent protection”) and 853 (“Without a well-structured system of patent protection, neither the research pharmaceutical industry nor the generic industry would be able to grow and prosper, and the rate of new product introductions and patent expirations would decline significantly”); *see also* Beckerman-Rodau, *supra.* at 91 (“reducing the economic value of patents by limiting the availability of property-based remedies for infringement... will [result in] less investment in pharmaceutical research which will produce fewer life-saving drugs”). Thus, patents help to build a healthier society.

C. Patents Prevent Free Riders

As seen above, patents enhance rather than inhibit innovation and competition. The real problem facing the patent system is not invalid patents but rather free riders. In short, free riders stifle innovation and the free-flow of information between inventors and producers. *See* Erik S. Maurer, Note, *An Economic Justification for a Broad Interpretation of Patentable Subject Matter*, 95 Nw. U. L. Rev. 1057, 1060-63 (2001); Ko, *supra* at 799; Rich, *The Relation Between Patent Practices and the Anti-Monopoly Laws*, *supra* at 177-80.

Accordingly, lowering the standard for invalidating patents, and thus making invalidity challenges less costly, may make it more worth the risk to copy or take a free ride on the efforts of others. Seeing this, other companies will curtail research and development efforts, and innovation will decrease significantly:

Without IP protection, second-comers could simply copy the innovation and thereby appropriate at least some portion of its economic value, without having to bear any related development costs. The possibility that third parties might "free ride" on the original inventor's investment in this manner increases the risk that the developer might be unable to earn a competitive return on this investment in the marketplace,

thereby diminishing or even eliminating the inventor's incentive to invest in future innovations.

Bradford L. Smith & Susan O. Mann, *Innovation and Intellectual Property Protection in the Software Industry: An Emerging Role for Patents?*, 71 U. Chi. L. Rev. 241, 241 (2004).²

Due to the free rider concern, many inventions will not make it into the hands of consumers at all absent strong patent protection. *See, e.g.*, Ko, *supra* at 799 (“A monopoly secured through patent protection could thus increase, rather than restrict, the use of an invention...”). The late Judge Rich, co-author of the modern patent laws, provided a good illustration of this concept. He recounts the plight of Mr. Spencer, who invented an improved wheelchair. Spencer neglected to patent his invention, however, preferring instead to donate his wheelchair to society. The problem was that because his invention lacked patent protection, no company would risk manufacturing it because competitors could too easily copy it. As a result,

² The authors of this article, Smith and Mann, are identified as senior in-house counsel for Microsoft. Ironically, although Microsoft often takes strong positions against patent protection for software, the authors advocate that software firms should embrace patent law as a means of protecting intellectual property in their software products. *See* Smith, *supra* at 242. Further, Microsoft has been identified as one of the top 10 companies obtaining U.S. patents in 2009, with 2,901 patents to its name. *See* Lawrence A. Stahl and Robert H. Fischer, *The Value of Patents to Technology Driven Companies*, 22 *Intell. Prop. & Tech. L. J.* 27 (2010).

the wheelchair never made it to market and never benefited society. Rich, 24 J. Pat. Off. Soc’y at 179.

On the other hand, patents force competitors to “design around,” meaning to invent new solutions that do not infringe the patent. Without strong patent protection, it would be far too tempting and too easy merely to copy the innovations of others. The threat of patent enforcement, however, stimulates research and prompts competitors to develop new, perhaps superior products that might otherwise have gone undeveloped. See *Yarway Corp. v. Eur-Control USA, Inc.*, 775 F.2d 268, 277 (Fed. Cir. 1985) (“This court has indicated that the incentive to ‘design around’ patents is a positive result of the patent system”). The end result of this tension between patent owners and would-be copyists is that patents actually stimulate, rather than hinder, innovation:

[I]ndustrial history discloses that [giant] corporations, at times and to some extent, have been prodded into undertaking such research and into developing improvements because of the threat of competition from occasional “outsiders,” armed with patent monopolies, and supplied with funds by a few private enterprisers. Thus, paradoxically, monopoly may evoke competition: The threat from patent monopolies in the hands of such “outsiders” may create a sort of competition—a David versus Goliath competition—which reduces the

inertia of some huge industrial aggregations that might otherwise be sluggish [in developing new products].

Picard., 128 F.2d at 642-43; *see also* Mark Blaxill & Ralph Eckardt, *The Invisible Edge: Taking Your Strategy to the Next Level Using Intellectual Property* 57 (2009) (patents allow smaller companies to compete with larger or better funded ones). In other words, patents force companies to compete and innovate rather than simply copy.

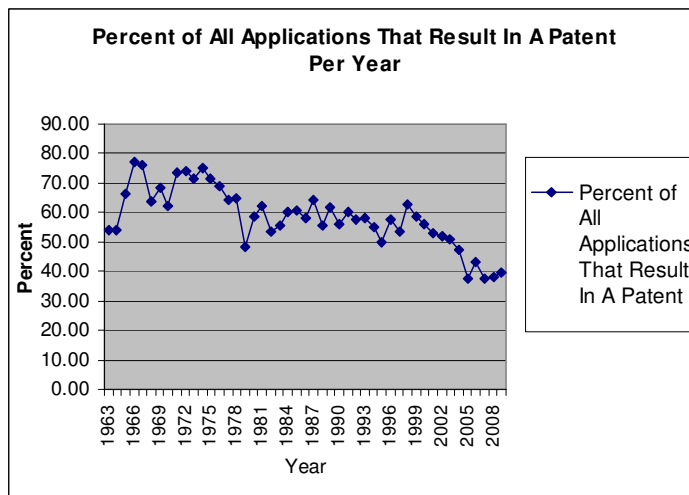
II. PATENTS ARE GENERALLY SOUND; THUS, THERE IS NO DIRE NEED FOR LOWERING THE STANDARD OF PROOF FOR CHALLENGING PATENTS

Congress imbued patents with a presumption of validity, 35 U.S.C. § 282, in part due to the understanding that a government agency, such as the USPTO, does its job well. *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984). The clear and convincing standard, in turn, stems from this presumption. *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1359-60 (Fed. Cir. 2007). This presumption is well deserved and supports the clear and convincing standard in all cases--even when the prior art was not considered by the USPTO. Statistics reveal that patents are of generally sound quality. Thus, there is no need to lower the evidentiary standard for invalidating patents.

A. The USPTO Issues Quality Patents

The notion that the patent system is broken, that the USPTO is churning out bad patents, is based on misperception rather than fact. See Neil E. Graham, *Perception Gap Hindering Efforts to Improve Patent System, Dudas Says*, 71 Pat. Trademark & Copyright J. 374 (2006). The statistics, however, tell quite a different story. As seen in Figure 1 below, the percentage of applications granted has actually decreased over the years, from a high of about 80% in the late 1960s to about 46% today.

Figure 1: Percentage of Patents Granted Per Year

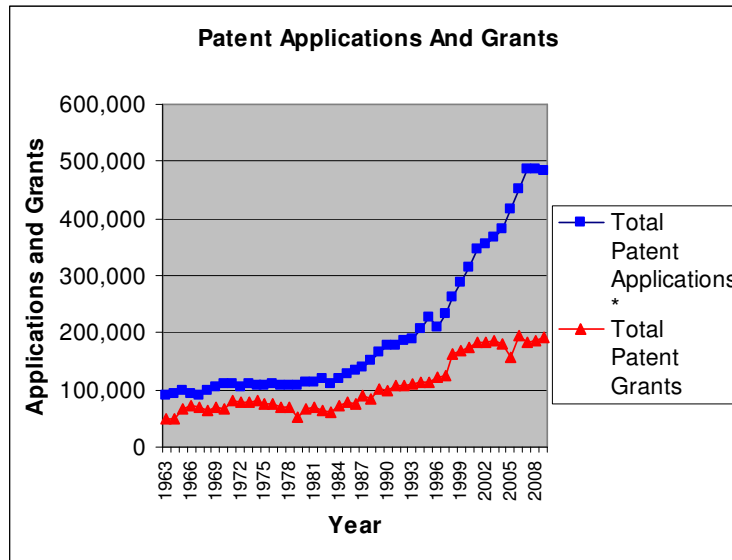


USPTO, US Patent Statistics Chart Calendar Years 1963-2010 *available at* http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last visited March 10, 2011). This downward trend shows that

the USPTO is exercising more care and selectivity in its screening of patent applications.

Moreover, as seen in Figure 2 below, the number of patents granted has leveled off even as applications have increased. Thus, the USPTO has become more selective even though more patent applications are filed.

Figure 2: Applications vs. Grants Per Year



Id.

A review of the patent application process shows that USPTO examiners are far from bored clerks rubber-stamping applications until the clock strikes five. The USPTO does not grant every application it receives. Rather, the USPTO is selective and screens applications with care.

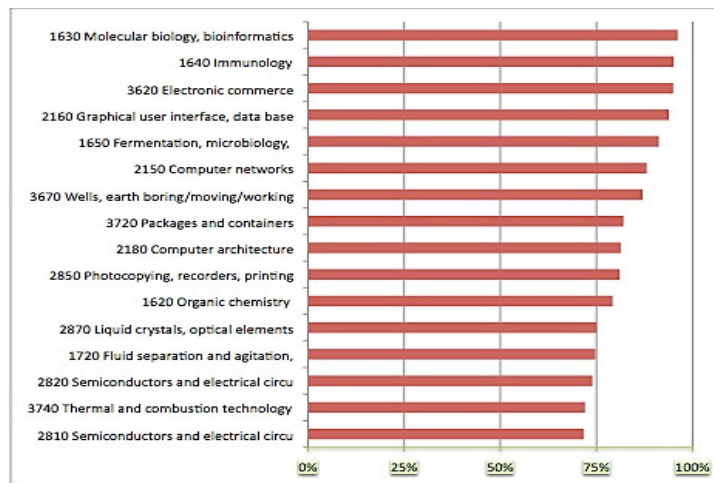
Specifically, when an inventor files a patent application, the USPTO assigns the application to an examiner versed in the technology of the claimed invention. After reviewing the application and searching for relevant prior art, the examiner typically rejects the application for one or more alleged defects and states his or her reasons in a so-called “office action.” A patent application often receives not just one but two rounds of office actions. To overcome a rejection, the applicant must justify the patentability of the invention (*e.g.*, by distinguishing prior art cited by the examiner). In some instances, the applicant must narrow the scope of the claims to overcome the rejection.

The USPTO rejects patent claims roughly 90% of the time. *See* Percentage of Patents That Were Initially Rejected, *available at* <http://www.patentlyo.com/patent/2009/04/percentage-of-patents-that-were-initially-rejected.html> (last visited Mar. 3, 2011). Indeed, a patent almost never issues on the first pass. *See, e.g.*, Andrew T. Zidel, *Patent Claim Construction in the Trial Courts: A Study Showing the Need for Clear Guidance from the Federal Circuit*, 33 Seton Hall L. Rev. 711, 717-18 n.49 (2003) (giving an overview of patent prosecution and positing that claims are initially rejected 75-100% of the time); USPTO, Data Visualization Center available at <http://www.uspto.gov/dashboards/patents/main.dashxml> (last visited March 16, 2011) (noting that on average each application receives 2.42 office actions before disposal); Larry J. Guffey, *Business Method Patents: What They Are - Why Clients and Service Providers Should Care*, 33 Md. B.J.,

July/Aug. 2000, at 25, 28 (initial rejection of patent claims occurs about 80% of the time and there are usually two rounds of office actions per application).

These statistics demonstrate that examiners are not asleep at the wheel. Indeed, as seen in Figure 3, a patent almost never issues on the first pass.

Figure 3: Patents That Were Initially Rejected



Percentage of Patents That Were Initially Rejected, *available at* <http://www.patentlyo.com/patent/2009/04/percentage-of-patents-that-were-initially-rejected.html> (last visited March 3, 2011).

Rather, it is very common that once the applicant responds to the first rejection, the application will be rejected at least a second time. *See* Guffey, *supra* at 25, 28 (there are usually two rounds of office actions per application).

The allowance of a patent application is not the end of the initial screening process. After allowance but before the patent issues, the application is subjected to a quality control process. A USPTO supervisor reviews the work of the primary examiner and further tests the allowed application. These quality control supervisors reject about 3% of initially allowed applications. For example, in 2009, the patent allowance compliance rate (*i.e.*, the percentage of allowed patents found to be correctly allowed after this second level of review) was about 96.9%. *See* U.S. Pat. & Trademark Office, Financial and Performance Highlights, at http://www.uspto.gov/about/stratplan/ar/2006/100_summary.jsp (last visited March 5, 2011). These statistics show that the overwhelming majority of allowed patents were correctly allowed the first time and that the rate of error is quite low. The statistics also reveal that the USPTO does recognize and catch its own mistakes.

B. Reexaminations Confirm That Patents Are Sound

Even after issuance, patents can still be tested through the reexamination process. *See* 35 U.S.C. § 301 *et seq.* The reexamination process serves as an additional layer of quality control. The outcomes of reexaminations show that patents are still sound even when all of the prior art was not considered during the original examination.

In a reexamination, a requestor (typically a motivated third party, such as a competitor or

accused infringer) submits to the USPTO prior art and arguments against patentability that the USPTO had not considered the first time. No presumption of validity applies during the procedure. The threshold test for reexamination is whether the prior art raises a “substantial new question of patentability.” 35 U.S.C. § 303(a). This threshold is quite low and easy to cross. As a result, reexaminations are almost always granted. From 1981, when reexaminations began, through 2010, the USPTO reviewed 11,211 requests for *ex parte* reexamination and denied the requests only 8% of the time. *See* US Pat. & Trademark Office, *Ex Parte* Reexamination Filing Data as of December 31, 2010, *available at* http://www.uspto.gov/patents/stats/Reexamination_Information.jsp (last visited March 15, 2011).

Even so, since 1981, *ex parte* reexaminations have resulted in cancellation of patents in only about 12% of cases. *Id.* In the remaining 88% of cases, patentability was confirmed either *in toto* or with some amendments to the claims. *Id.* Specifically, patent claims survive unscathed in 23% of cases. In the other 65% of the cases, some claims are amended or cancelled but the patent as a whole survives. *Id.*; *see also, e.g.*, Stuart J. Graham *et al.*, *Post-Issue Patent “Quality Control”: A Comparative Study of US Patent Re-examinations and European Patent Oppositions* 34 (2002), *available at* <http://escholarship.org/uc/item/8bs830w9#page-1> (last visited March 16, 2011)(analyzing all U.S. patents reexamined from

1980 to 1999).³ That statistic alone confirms that the USPTO generally did its job well the first time around.

III. TILTING THE SCALES TOWARDS INFRINGERS WEAKENS PATENTS AND, IN TURN, INHIBITS PROGRESS

Making it even easier for accused infringers to evade patents by lowering the clear and convincing standard does nothing to promote progress, lower litigation costs, or strengthen the patent system. Rather, lowering the standard of proof will merely give accused infringers one more weapon in their already over-stocked arsenal for challenging patents. That arming of defendants will increase uncertainty as to the enforceability of patents and drive up litigation costs by forcing the parties to risk more on a 50/50 proposition (*i.e.*, the preponderance of the evidence standard). As a result, lowering the standard will decrease the willingness of enterprises to fund new businesses and new technologies because they will be uncertain as to whether patents can effectively protect their investments and labors.

³ A second type of reexamination procedure, *inter partes* reexamination, typically results in a greater percentage of cancellations. But that statistic is based on a much smaller sample. Only 1115 *inter partes* have been filed through December 2010 as compared with 11,211 *ex parte* proceedings. See http://www.uspto.gov/patents/stats/Reexamination_Information.jsp. Further, the percentage of *inter partes* cases in which all patent claims are confirmed has risen over the years and is starting to resemble *ex parte* outcomes.

A. Death by a Thousand Cuts

There are already enough ways for an accused infringer to attack a patent and thus no need to tilt the scales even further towards infringers. These weapons for attacking patents including the following commonly-asserted defenses:

- Carping over the meaning of a claim term to narrow the claim's scope, which could help the infringer avoid infringement based on hair-splitting and word play rather than on the actual technology deployed. For example, patent litigations have hinged on the meaning of such plain English, non-technical words as "a" and "to" and even "and" and "or." *See, e.g., Cybor Corp. v. FAS Techs.*, 138 F.3d 1448 (Fed. Cir. 1998) (dispute over the claim term "to"); *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243 (Fed. Cir. 1998) ("when"); *Hockerson-Haberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369 (Fed. Cir. 1999) ("from"); *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351 (Fed. Cir. 2000) ("a"); *Schumer v. Lab. Computer Sys., Inc.*, 308 F.3d 1304 (Fed. Cir. 2002) ("or"); *02 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351 (Fed. Cir. 2008) ("only if"); *Ortho-McNeil Pharm. Inc. v. Mylan Labs. Inc.*, 520 F.3d 1358 (Fed. Cir. 2008) ("and").

- Arguing under 35 U.S.C. § 102(a) that a prior art reference anticipates the patent claims.
- Arguing under 35 U.S.C. § 102(b) that a prior sale or public use bars the patent claims.
- Arguing under 35 U.S.C. § 103 that a combination of prior art references renders the patent obvious. Indeed, the standard for showing obviousness has already been made easier in the wake of *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007), which relaxed the “teaching-suggestion-motivation” test for proving obviousness.⁴
- Arguing under 35 U.S.C. § 112, ¶ 1 that the patent specification fails to describe or enable the claims or fails to disclose the best mode for practicing those claims.
- Arguing under 35 U.S.C. § 112, ¶ 2 that the claims are indefinite.
- Arguing that the patentee committed inequitable conduct (*i.e.*, fraud on the patent office) in obtaining the patent.

⁴ Studies have shown that since *KSR*, more patent applications have been refused based on obviousness and more patents have been invalidated for that reason in litigation. See, Ali Mojibi, *An Empirical Study of the Effect of KSR v. Teleflex on the Federal Circuit’s Patent Validity Jurisprudence*, 20.3 Alb. L.J. Sci. & Tech. 559, 582-84 (2010).

- Arguing that the patent owner misused its patent rights.

In addition, as discussed in Section II.B above, an accused infringer can seek to have the patent reexamined in a USPTO administrative proceeding. The threshold for reexamination is exceedingly low, resulting in the grant of reexamination 92% of the time. Overall, *ex parte* reexaminations last an average of 2 years while *inter partes* reexaminations last about 3 years. See USPTO, *Ex Parte* Reexamination Filing Data as of December 31, 2010, available at http://www.uspto.gov/patents/stats/Reexamination_Information.jsp (last visited March 15, 2011). During that interval, co-pending patent litigations are often stayed, meaning that the patent owner must wait to enforce its patent rights while an infringer continues infringing. See *Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 582 F.3d 1288, 1305 (Fed. Cir. 2009) (concurring opinion) (noting that through June 2009, 31% of *ex parte* reexaminations and 66% of *inter partes* reexaminations relate to patents that are in litigation). In other words, reexamination is a good bet for accused infringers. The request for reexamination is almost always granted. And even if the reexamination does not ultimately result in cancellation of the patent, it at least delays court enforcement. That delay in enforcement further adds to the cost of enforcement and lessens the attractiveness of

patents to investors--and hence the ability to fund research and development of new technologies.⁵

B. Without Strong Patents, Innovation Will Decline

As discussed above, patents foster innovation and boost the American economy. *See, e.g., Kewanee Oil*, 416 U.S. at 480 (“The productive effort thereby fostered [by patents] will have a positive effect on society through the introduction of new products and processes of manufacture in the economy, and the emanations by way of increased employment and better lives for our citizens”); David J. Kappos, *Building Bridges and Making Connections Across the IP System*, 20 Federal Cir. Bar J. 273-280, 274 (2010) (noting that “IP is becoming the necessary instrument—in many cases, the only instrument—for innovators and businesses to capture value as their goods and services move to the marketplace”).

When patents are perceived to be difficult to enforce, however, innovation and large segments of the economy stagnate or decline. *See, e.g., Andrew Beckerman-Rodau, Patents Are Property: a Fundamental but Important Concept*, 4 J. Bus.

⁵ Judge Newman of the Federal Circuit observed that reexamination is often just a shameless delay tactic to forestall legitimate and speedy enforcement of a patent. *See Fresenius USA Inc.*, 582 F.3d at 1305 (concurring opinion) (“if routinely available to delay the judicial resolution of disputes, the procedure is subject to inequity, if not manipulation and abuse, through the delays that are inherent in PTO activity”).

& Tech. L. 87, 93 (2009) (“Absent the ability to assert patent property rights, fewer inventions will be patented and the public storehouse of knowledge will decrease without the public disclosure from those patents”).

The link between strong patents and a healthy economy is strong. For example, the 1970s is generally seen as a decade of economic stagnation in which the U.S. lost its edge to foreign competition. Toyota and BMW began to compete with GM and Ford. Sony color TVs quickly outsold those of RCA. Scholars explain that during that decade, government policies and academic theories tended to view patents suspiciously. Likewise, courts in the 1970s tended to invalidate patents more frequently and otherwise issued rulings that weakened patent protection. These policies, court rulings, and academic theories made patents less attractive to American businesses. As a result, patent applications by U.S. companies declined sharply. R&D spending and technological innovation likewise declined. Foreign companies were soon able to outpace American innovation or--just as often--were able to buy up devalued American patents and inventions at bargain rates. See Mark Blaxill & Ralph Eckardt, *The Invisible Edge: Taking Your Strategy to the Next Level Using Intellectual Property* 57, 66-69 and 232-38 (2009); David Silverstein, *Patents, Science and Innovation: Historical Linkages and Implications for Global Technological Competitiveness*, 17 Rutgers Computer & Tech. L.J. 261, 268-70 and 302-315 (1991).

Beginning in the 1980s, however, with some pro-patent rulings by the (then newly-formed) Federal Circuit and a pro-patent shift in government policies and academic philosophy, patents came back into fashion. An improved economy and a boom in technological innovation soon followed. *Id.* For example, according to economic studies, the growth of the biotechnology industry in the United States since 1980 is largely due to a revived patent system. F. Scott Kieff, *Facilitating Scientific Research: Intellectual Property Rights and the Norms of Science--A Response to Rai and Eisenberg*, 95 Nw. U. L. Rev. 691, 701 (2001) (citing studies by the National Research Council and others).

Predictability in the patent system is crucial to promoting the costs and risks associated with innovation. In turn, innovation is at the heart of American competitiveness in the global economy. Silverstein, *supra* at 318-19 (1991); *see also Hilton Davis Chem. Co. v. Warner-Jenkinson Co. Inc.*, 62 F.3d 1512, 1529 (Fed. Cir. 1995) (“Technologic innovation has driven the American economy, over the past century, to the exclusion of virtually all other growth factors”) (Newman, J. dissenting), *rev’d*, 520 U.S. 17 (1997); Reed Albergotti, *The Most Inventive Towns in America*, Wall St. J., July 22, 2006, at P6 (“One upside of these innovations is that new patents often lead to the creation of new companies, which in turn mean more jobs”).

Of course, Microsoft and others contend that invalid patents do not provide these benefits. Yet

even if only seemingly invalid patents are challenged, there is no guarantee that the public will reap the benefits. As Circuit Judge Newman of the Federal Circuit noted, validity challenges do not always benefit the public:

The Court in *Lear* apparently believed that “full and free competition” ensues when a patent is eliminated from the rolls. The experience of the marketplace is otherwise. The usual incentive to the patent licensee in taking the license is, and always has been, the opportunity for profit. If the destruction of a licensed patent would not enhance profits but instead facilitate the entry of competitors, this would surely be weighed by a licensee before embarking on a *Lear* authorized challenge to the licensed patent. It is common experience - and common sense - that challenges to patent validity by either licensees or assignors, albeit serving the private interest of the challenger, carry scant public benefit. The nobler expectations of *Lear* have few testimonials.

Diamond Scientific Co. v. Ambico, Inc., 848 F.2d 1220, 1228 (Fed. Cir. 1988) (Newman, J., concurring) (citation omitted).

Accordingly, the current clear and convincing evidence standard must be maintained across the board as a way to instill confidence in the enforceability of patents and make would-be infringers think twice before copying the innovation of others. The BPLA thus respectfully urges this Court to reject Microsoft's bid to upset the delicately-balanced patent system.

CONCLUSION

For the reasons discussed above, this Court should not lower the standard of proof required for challenging patents in court litigation.

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