

**In the Supreme Court of the United States**

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SAINT-GOBAIN CERAMICS & PLASTICS, INC.,  
PETITIONER

*v.*

SIEMENS MEDICAL SOLUTIONS USA, INC.

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

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**BRIEF FOR THE UNITED STATES AS AMICUS CURIAE**

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### **QUESTION PRESENTED**

Whether a patent holder is required to prove infringement under the doctrine of equivalents by clear and convincing evidence when the alleged equivalent is the subject of a separate patent.

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# In the Supreme Court of the United States

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## **BRIEF FOR THE UNITED STATES AS AMICUS CURIAE**

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This brief is filed in response to the Court's order inviting the Solicitor General to express the views of the United States. In the view of the United States, the petition for a writ of certiorari should be denied.

### **STATEMENT**

1. a. The United States Patent and Trademark Office (PTO) is "responsible for the granting and issuing of patents." 35 U.S.C. 2(a)(1). When an applicant seeks a patent, an examiner with expertise in the relevant technological fields analyzes the application and the invention it describes, as well as the relevant prior art. The PTO may issue a patent if the examiner determines that the alleged invention consists of patent-eligible subject matter, 35 U.S.C. 101; that it claims a novel advance over the prior art, 35 U.S.C. 102; and that it is not obvi-

ous in light of the prior art, 35 U.S.C. 103(a); *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) (*KSR*).

Because “inventions in most, if not all, instances rely upon building blocks long since uncovered,” *KSR*, 550 U.S. at 418, the Patent Act authorizes patents to be granted for “improvement[s]” on earlier inventions. 35 U.S.C. 101. If an improvement is novel and non-obvious, and the “conditions and requirements” of the Patent Act are otherwise satisfied, *ibid.*, the inventor of the improvement is entitled to a patent even if the underlying subject matter has been patented by someone else. As a practical matter, however, it will often be infeasible to practice the improved invention without simultaneously practicing the original invention. When that occurs, the owner of a patent on the improved invention can exclude others from practicing the improved invention, but he cannot lawfully practice it himself without the permission of the owner of the patent on the original invention. That is because a United States patent does not confer on its owner an affirmative right to exploit the intellectual property it protects, but only “the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States.” 35 U.S.C. 154(a)(1); see generally Pet. App. 75a (Lourie, J., concurring in the denial of the petition for rehearing en banc).

b. Under the Patent Act, a “patentee shall have remedy by civil action” against any person who “without authority makes, uses, offers to sell, or sells” the patented invention in the United States. 35 U.S.C. 281, 271(a). The scope of the patentee’s rights in an action for infringement is determined by the approved claims, which define the metes and bounds of the invention. See

35 U.S.C. 112; *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373-374 (1996).

A patentee may prove infringement by demonstrating that the accused product or process incorporates all of the elements of any claim in the patent. This is known as literal infringement. In addition, under the “doctrine of equivalents,” a product “that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product \* \* \* and the claimed elements of the patented invention.” *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997). Although this Court has suggested that no single verbal formula will be adequate for all equivalence inquiries, see *id.* at 39-40, one traditional method of proving equivalence is to show that “an element of the accused product performs substantially the same function in substantially the same way to obtain the same result as an element of the patented invention.” Pet. App. 11a (citation and internal quotation marks omitted); see *id.* at 37a (Prost, J., dissenting).

c. The traditional standard of proof for patent infringement is proof by a preponderance of the evidence. See, e.g., 5B Donald S. Chisum, *Chisum on Patents* § 18.06 (2007) (*Chisum*). A party accused of infringement is therefore entitled to judgment if the patentee fails to show by a preponderance of the evidence that the accused product infringes any claim of the patent-in-suit, either literally or under the doctrine of equivalents. See 35 U.S.C. 282.

A party accused of infringement may also defend on the ground that the asserted patent claims are invalid. See 35 U.S.C. 282. Under the Patent Act, however, a patent that has been granted by the PTO is “presumed



valid,” and “[t]he burden of establishing invalidity \* \* \* shall rest on the party asserting such invalidity.” *Ibid.* To establish that defense, the alleged infringer must prove the invalidity of the asserted patent claims by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2242 (2011).

2. The patent dispute in this case concerns scintillator crystals used in positron emission tomography (PET) imaging, an advanced medical-imaging technique. Pet. App. 2a. In a PET scan, a patient is given a dose of a radioisotope and then placed in a PET scanner, which resembles a magnetic resonance imaging (MRI) machine. As the radioisotope decays, it emits positively charged nuclear particles known as positrons, which collide with nearby electrons in the patient’s body and produce gamma radiation. *Ibid.* Scintillator crystals in the PET scanner, arranged around the patient’s body in a ring, then detect the resulting pattern of gamma rays, which the scanner uses to generate a three-dimensional image of the inside of the patient’s body. *Ibid.* The performance characteristics of a PET scanner depend in large measure on the type of scintillator crystal that it uses. See *id.* at 60a-61a.

Respondent manufactures and sells high-end PET scanners that employ scintillator crystals made from cerium-doped lutetium oxyorthosilicate (LSO). Pet. App. 3a, 61a. United States Patent No. 4,958,080 (1990) (the ’080 patent), to which respondent held an exclusive license, claims a gamma radiation detector that uses LSO crystals.<sup>1</sup> Pet. App. 41a. When the ’080 patent issued, LSO crystals “were generally recognized as the next scintillation crystal generation technology” because

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<sup>1</sup> The ’080 patent expired in October 2008. Pet. App. 43a.

they had “improved scintillation properties, such as light output, energy resolution, scintillation decay time, and index of refraction, over prior art crystals,” and consequently enabled better PET images. *Id.* at 43a.

Petitioner manufactures and sells scintillator crystals for use in PET scanners. Pet. App. 3a. Petitioner’s crystals consist of cerium-doped lutetium-yttrium orthosilicate (LYSO), which resembles LSO except that some of the lutetium atoms in the crystal—in the case of petitioner’s crystals, ten percent—are replaced by yttrium atoms. *Ibid.* Petitioner manufactures its LYSO crystals under a non-exclusive license to United States Patent No. 6,624,420 B1 (2003) (the ’420 patent), which claims gamma radiation detectors using LYSO scintillator crystals. The ’420 patent lists the ’080 patent on its front page as one of the prior art references considered by the PTO during the examination process. Pet. App. 4a.

3. a. In April 2007, respondent brought this suit against petitioner for contributory and induced infringement of the ’080 patent. Pet. App. 5a; see 35 U.S.C. 271(b) and (c). The theory of the suit was that petitioner had sold its LYSO crystals to one of respondent’s competitors, which had incorporated the crystals into PET scanners, and that those scanners (the accused scanners) infringed the ’080 patent. See Pet. App. 3a, 5a, 44a. It was uncontested that the accused scanners did not literally infringe the ’080 patent, which claims a scanner that uses only LSO crystals. *Id.* at 44a; see *id.* at 3a (reproducing claim 1 of the ’080 patent). It was also undisputed that the accused PET scanners literally met every other element of claim 1 of the ’080 patent. *Id.* at 5a n.1. The only issue was whether, under the doctrine of equivalents, scanners incorporating peti-

tioner's LYSO crystals met the "scintillator" element of the asserted claims of the '080 patent. See *id.* at 44a.

Respondent argued that the accused scanners infringed because petitioner's LYSO crystals performed substantially the same function as LSO crystals, in substantially the same way, to achieve substantially the same result. Pet. App. 44a-45a. Cf. *Warner-Jenkinson*, 520 U.S. at 34-35. Petitioner denied that the accused scanners met the "scintillator" element of the '080 patent, emphasizing that the PTO had granted a separate patent (the '420 patent) for a scanner using LYSO crystals. Pet. App. 45a.

b. The case was tried to a jury. Petitioner requested two jury instructions relating to the '420 patent. First, petitioner sought an instruction that the '420 patent was presumed valid and that respondent had not challenged the patent's validity. Pet. App. 45a. Second, petitioner asked the court to instruct the jury that, because the PTO had granted a separate patent for scanners that incorporated LYSO crystals, the jury could not find that the accused scanners infringed the '080 patent under the doctrine of equivalents except by "clear and convincing evidence"—*i.e.*, the heightened standard of proof required to establish the invalidity of a patent. *Ibid.*

The district court rejected both requests. See Pet. App. 45a, 49a-51a, 54a-55a. The court instructed the jury that the standard of proof for finding infringement was a preponderance of the evidence. *Id.* at 5a. Regarding the '420 patent, the court instructed the jury:

[Y]ou have heard evidence that [petitioner] has a license under the ['420] patent to produce its 10% Y LYSO crystal. In connection with that evidence, I instruct you that a product that is covered by a subsequent patent may still infringe an earlier patent.

Nonetheless, in considering the issue of infringement under the doctrine of equivalents, you may consider that [petitioner] obtained the license under the ['420] patent, which may be some evidence that the differences between the 10% Y LYSO crystal and the claimed LSO crystal are substantial.

*Id.* at 6a. The court further instructed the jury that “[o]ne way to decide whether” the differences between the two crystals were substantial “is to consider whether \* \* \* the 10% Y LYSO crystal performed substantially the same function, in substantially the same way, to achieve substantially the same result as the LSO crystal in the asserted claim.” *Id.* at 82a (Newman, J., concurring in denial of the petition for rehearing en banc) (citing jury instructions).

The jury returned a verdict finding petitioner liable for infringement. Pet. App. 6a.

4. A divided panel of the court of appeals affirmed. Pet. App. 1a-35a.

a. The court of appeals held that the district court had correctly instructed the jury on the standard of proof for finding infringement. Pet. App. 9a-18a. Petitioner argued that a “clear and convincing evidence” standard was necessary in this case because, by finding that scanners incorporating the LYSO crystals had infringed the '080 patent under the doctrine of equivalents, the jury had “constructively invalidated” the '420 patent. *Id.* at 9a. Petitioner argued that the '420 patent represents the PTO’s judgment that LYSO crystals are patentably distinct from the LSO crystals disclosed in the '080 patent, but that the jury’s finding of equivalence “clearly implied” that the '420 patent was “invalid[] for obviousness” under 35 U.S.C. 103. Pet. App. 9a.

The court of appeals rejected that argument, explaining that patent infringement, “whether literal or by equivalence, is an issue of fact, which the patentee must prove by a preponderance of the evidence.” Pet. App. 11a. The court acknowledged that, when an “alleged equivalent is claimed in a separate patent, this fact, when weighed by the fact-finder together with all other relevant evidence, may make equivalency ‘considerably more difficult to make out’ by a preponderance of the evidence.” *Id.* at 13a (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1379-1380 (Fed. Cir. 2007), cert. denied, 553 U.S. 1093 (2008)). The court concluded, however, that the fact of separate patentability does not justify a departure from the preponderance standard itself. See *ibid.*

The court of appeals also rejected petitioner’s assumption that “equivalence is tantamount to obviousness.” Pet. App. 16a. The court explained that obviousness and equivalence involve different legal tests for evaluating the relationship between the claimed invention and the prior art, and that the relevant inquiries arise at different times, with obviousness being evaluated as of the time the invention was made and equivalence being determined at the time of infringement. See *id.* at 16a-17a. The court determined that “[t]hese and other differences between equivalence and obviousness undermine [petitioner’s] theory of ‘constructive invalidation.’” *Id.* at 17a.<sup>2</sup>

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<sup>2</sup> The court of appeals also rejected petitioner’s argument that the district court should have instructed the jury that the ’420 patent was entitled to a presumption of validity. The court explained that such an instruction was unwarranted because “[p]atent validity was not an issue before the jury.” Pet. App. 19a-20a.

b. Judge Prost dissented. Pet. App. 35a-40a. In Judge Prost's view, the jury should have been instructed that it could find equivalence "if and only if it also found that the state of the art concerning LSO crystals had advanced" between the PTO's issuance of the '420 patent and the time of the alleged infringement, so that petitioner's LYSO crystals, "though previously nonobvious, had become obvious and insubstantial." *Id.* at 39a-40a.

5. The court of appeals denied rehearing en banc, with three judges dissenting. See Pet. App. 73a-89a.

#### DISCUSSION

In the United States, the standard of proof for patent infringement has always been proof by a preponderance of the evidence. The court of appeals correctly declined to depart from that rule and impose a heightened standard in the narrow circumstances presented here, in which a product that incorporates a patented improvement is alleged to infringe an earlier patent under the doctrine of equivalents. Contrary to petitioner's argument, there is no logical inconsistency between a PTO determination that an improvement is non-obvious and a jury finding that the improvement is the "equivalent" of something claimed in an earlier patent. And even if a finding of infringement in a particular case did cast doubt on the validity of a later patent, that unusual circumstance would not justify adopting a "variable standard of proof that must itself be adjudicated in each case." *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2250 (2011) (*Microsoft*). The petition for a writ of certiorari should be denied.

**A. There Is No Division Of Authority Over The Proper Standard Of Proof For Patent Infringement**

A suit for patent infringement is a civil cause of action “sounding in tort,” *Belknap v. Schild*, 161 U.S. 10, 17 (1896), and claims of infringement have always been subject to proof by a preponderance of the evidence, the “standard generally applicable in civil cases,” *Herman & MacLean v. Huddleston*, 459 U.S. 375, 390 (1983). Justice Story, riding circuit in 1844, invoked the preponderance-of-the-evidence standard in upholding a jury verdict in a patent case. *Washburn v. Gould*, 29 F. Cas. 312, 329 (C.C.D. Mass. 1844) (No. 17-214) (Story, J.) (concluding that, on the question “whether the defendant used the patent machine, or one substantially different from it,” the jury properly rendered a verdict “according to the preponderance of the evidence”). This Court applied the same standard of proof in *Bene v. Jeantet*, 129 U.S. 683 (1889), explaining that “the complainants did not make out a case of infringement” because “[t]here is not a preponderance of evidence in their favor.” *Id.* at 688. Since that time, the preponderance standard has uniformly governed patent-infringement cases in the federal courts. A leading commentator thus states without qualification that “[a] patent owner bears the burden of proof by a preponderance of the evidence on fact issues relating to infringement.” *Chisum* § 18.06[1][b]; see *id.* at n.20 (collecting cases).

Petitioner contends that a heightened standard of proof should apply in circumstances where a jury finding of infringement would operate as “a *de facto* finding” that a separately issued patent was invalid. Pet. 18. As we explain below (pp. 14-17, *infra*), the premise of that argument is mistaken, since the jury’s finding of infringement in this case did not imply that the ’420 patent

is invalid. But even if the premise of petitioner's argument were correct, petitioner identifies no decision in which any court has held that the standard of proof for patent infringement should vary when patent rights overlap.

The PTO often issues patents for inventions that cannot be practiced without infringing the rights of others. For example, patents are commonly granted for improvements to earlier products or processes that themselves remain subject to patent protection. If the improvement satisfies the requirements of the Patent Act, it is entitled to patent protection even if the improvement cannot be exploited without infringing on patents previously granted to others. For example, the PTO might grant a patent for a novel machine, and subsequently grant a patent to someone else for the same machine with novel safety features. Or a pharmaceutical company might obtain a patent for a novel anti-cancer drug, while another company obtains a patent for the same drug packaged in a novel form that is faster or less costly to manufacture. In each case the second patent may issue even though practicing the improved invention would infringe the pre-existing patent.

The existence of overlapping patents of this kind does not affect the validity of either patentee's rights or impair either's ability to obtain a remedy for infringement. That is because a patent does not confer an affirmative right to exploit the invention it discloses, but only the right to prevent others from doing so. See 35 U.S.C. 154(a)(1). As this Court has explained, "the only effect of [an inventor's] patent is to restrain others from manufacturing, using or selling that which he has invented." *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 510 (1917). When patent



rights overlap, each patent holder therefore may separately exercise the power to exclude. “The prior patentee cannot use [the improvement] without the consent of the improver, and the latter cannot use the original invention without the consent of the former.” *Smith v. Nichols*, 88 U.S. 112, 119 (1874); see, e.g., *Cantrell v. Wallick*, 117 U.S. 689, 694 (1886); *Blake v. Robertson*, 94 U.S. 728, 733 (1876); *Evans v. Eaton*, 20 U.S. 356, 429 (1822).

There is nothing exceptional in the conclusion that—as the jury found here—a device that embodies one patented invention cannot be sold without infringing another, earlier patent. Such infringement suits proceed according to the same rules as any other. Indeed, this Court has at least twice upheld findings of patent infringement under the doctrine of equivalents when the alleged equivalent was covered by another patent. See *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 43 (1929); *Hildreth v. Mastoras*, 257 U.S. 27, 36-37 (1921). In neither case did the Court apply a different standard of proof, or endorse the notion that the existence of the later patent affected the infringement analysis under the earlier one.<sup>3</sup> Nor has the Federal Circuit or any other court of appeals suggested that a heightened standard of proof applies when a device accused of infringing by equivalents is separately patented. See, e.g., *Hoechst*

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<sup>3</sup> In *Hildreth*, the court of appeals concluded that the PTO’s issuance of the second patent “raised a presumption of a patentable difference between that patent and the [first] patent, and against infringement.” See 257 U.S. at 36. This Court reversed, explaining that it was unnecessary to resolve that question because “whatever presumption against infringement may attach to the issuing of the second patent, *if any*, the evidence here is quite sufficient to overcome it.” *Id.* at 36-37 (emphasis added).

*Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1582 (Fed. Cir.), cert. denied, 519 U.S. 911 (1996); *Atlas Powder Co. v. E.I. du Pont Nemours & Co.*, 750 F.2d 1569, 1580-1581 (Fed. Cir. 1984); *Hildreth v. Auerbach*, 223 F. 651, 652 (2d Cir. 1915); *Herman v. Youngstown Car Mfg. Co.*, 191 F. 579, 584-585 (6th Cir. 1911).

The preponderance standard has prevailed in patent infringement actions for more than a century, long before the Federal Circuit was created, including in cases where the accused device or process was itself separately patented. The court of appeals properly refused to disturb that established principle, and the absence of any division of authority on the question presented is a sufficient reason to deny the petition.

#### **B. The Court Of Appeals' Decision Is Correct**

Petitioner contends that it was entitled to an instruction requiring proof of infringement by clear and convincing evidence because the jury's finding of infringement under the doctrine of equivalents effectively "nullified" the "statutory presumption of validity that attaches to later-granted patents." Pet. 13. In petitioner's view, the jury's verdict in this case logically depends upon a determination that the accused infringing device (a PET scanner containing petitioner's LYSO crystals) is "insubstantially different" from the device disclosed in the '080 patent, which uses LSO crystals. Pet. 2. That determination, petitioner further argues, "is necessarily a finding" that the '420 patent "is obvious and thus invalid in light of the prior art." Pet. 2-3. Petitioner contends that the heightened standard of proof for challenges to the validity of patents therefore should have governed the infringement inquiry here. See Pet. 18.

The court of appeals correctly rejected that argument. Pet. App. 9a-18a.

1. Contrary to petitioner’s contention, a jury’s finding that a patented product infringes an earlier patent under the doctrine of equivalents does not imply anything, logically or legally, about the validity of the later patent. A patent is invalid as obvious if “the subject matter as a whole would have been obvious *at the time the invention was made* to a person having ordinary skill in the art.” 35 U.S.C. 103(a) (emphasis added). The inquiry under the doctrine of equivalents, by contrast, is whether a person skilled in the art would understand *at the time of infringement* that the accused element in question was an equivalent of the element claimed in the patent. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 37 (1997); Pet. App. 17a. The PTO may therefore properly grant a patent for an improved product that was not obvious to other skilled artisans at the time the improvement was made, but that, once disclosed to the public, was immediately recognized as an equivalent to something claimed in an earlier patent.<sup>4</sup>

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<sup>4</sup> As the court of appeals noted, Pet. App. 16a-18a, the obviousness and equivalence inquiries differ in other important respects as well. When a patent examiner considers obviousness, he compares the claimed invention to the disclosures in the prior art by considering “the subject matter as a whole.” 35 U.S.C. 103(a). In contrast, a jury considering a claim of infringement by equivalents must compare the accused product to the patent claims on an element-by element basis. *Warner-Jenkinson*, 520 U.S. at 40. In addition, “secondary considerations,” *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966), are relevant to the obviousness analysis, but they have no bearing on the equivalence inquiry. Thus, for example, evidence of commercial success or long-felt need, *ibid.*, could affect the examiner’s assessment of whether a claimed invention was non-obvious and therefore patentable, but such

Inventions are frequently conceived not as new solutions to new problems, but as *better* solutions to *known* problems for which a patented solution already exists. If a new invention is better because it solves the relevant problem in a different way or yields a materially different result than the pre-existing machine or process, it will not likely infringe the earlier patent under the doctrine of equivalents. See *Warner-Jenkinson*, 520 U.S. at 39-40. In other cases, however, a patentable improvement may be valuable precisely because it accomplishes the same practical end as an existing invention but has other advantages, such as lower cost, better durability, ease of manufacture, or simpler maintenance. See *Herman*, 191 F. at 585 (“Patentable difference does not of itself tend to negative infringement. It may just as well be based upon infringement, plus improvement; and improvement may lie in addition, simplification, or variance.”). A gasoline engine made of an inexpensive metal previously thought to be unsuitable for that use, for instance, might well be patentable as novel and non-obvious, yet still be the “equivalent” of a traditional engine in a patented automobile. The PTO examines such improved inventions to determine whether, in its expert judgment, the claimed improvement satisfies the requirements of the Patent Act, without regard to whether practicing the improved invention would infringe an earlier patent under the doctrine of equivalents.

This case illustrates the principle. The jury found that, under the doctrine of equivalents, a PET scanner using petitioner’s LYSO scintillator crystals infringed the ’080 patent, which disclosed a comparable scanner

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evidence would be irrelevant to whether an accused product infringed an earlier patent under the doctrine of equivalents.

using LSO crystals. See Pet. App. 5a-6a. Petitioner emphasizes (Pet. 17) that, in granting the '420 patent, the PTO determined that LYSO crystals were not obvious in light of the prior art, including the PET scanner disclosed in the '080 patent. But as the inventors who obtained the '420 patent explained, their goal was simply to invent a scintillator crystal that would “retain the LSO scintillating properties,” '420 patent, col. 4, ll. 31-32, while avoiding several “tough economic issues” associated with LSO crystals. *Id.* at col. 4, l. 6. The '420 patent explains, for example, that LSO crystals require extremely high temperatures to melt, necessitating the use of special equipment that is costly to replace, see *id.* at col. 4, ll. 6-15, and that the raw material needed to manufacture LSO—lutetium oxide—is uncommon, expensive, and often insufficiently pure, see *id.* at col. 4, ll. 15-20. The inventors discovered that, by substituting yttrium atoms for a portion of the lutetium atoms in LSO crystals to create LYSO crystals, they could mitigate the expense and other difficulties associated with the manufacture of LSO crystals while retaining substantially the same optical performance. See *id.* at col. 6, l. 59 to col. 7, l. 10.

The PTO granted the '420 patent because the use of yttrium in scintillator crystals represented a novel and non-obvious advance over the prior art.<sup>5</sup> The practical

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<sup>5</sup> The PTO initially rejected the claims in the '420 patent in light of the '080 patent and a British patent disclosing a powder that contained both lutetium and yttrium. The PTO examiner determined that it would have been obvious to a person skilled in the art to try to build a scintillator crystal with yttrium. See '420 patent Image File Wrapper, 10/19/01 Non-Final Rejection, at 5-7 (available at <http://portal.uspto.gov/external/portal/pair>). One of the inventors of LYSO crystals responded to the obviousness rejection with a declaration explaining,

utility of LYSO crystals, however, is that they are more easily and cheaply produced than LSO crystals, yet serve as equally effective component parts within PET scanners. The jury's determination that "the 10% Y LYSO crystal performed substantially the same function, in substantially the same way, to achieve substantially the same result as the LSO crystal," Pet. App. 82a (Newman, J., concurring in denial of the petition for rehearing en banc) (quoting jury instructions), was therefore entirely consistent with the PTO's expert determination that, at the time of the invention for which the '420 patent was granted, it would not have been obvious to persons skilled in the art to use yttrium in scintillating crystals. The jury's finding does not imply that the '420 patent was invalid, but only that PET scanners using the improved scintillator crystals described in the '420 patent also infringe the underlying invention claimed in the '080 patent. The court of appeals thus correctly rejected petitioner's proposal to depart from settled practice by requiring proof of patent infringement by clear and convincing evidence.

2. Although the inquiries required under the doctrine of equivalents and under Section 103 are distinct, those inquiries may overlap in some respects, and certain evidence may be significant to both questions. Unusual cases therefore could arise in which a plaintiff's proffered evidence of equivalence also suggests that a separate issued patent should have been denied on the ground of obviousness. Even in such rare cases, how-

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*inter alia*, that it was "quite [a] surprise" that lutetium and yttrium would combine evenly to form single crystals, given the significantly different weight of lutetium and yttrium atoms. See *id.*, 04/23/02 Declaration of Bruce H.T. Chai, at 5-6. The patent examiner thereafter allowed the claims.

ever, it would not be appropriate to impose a heightened standard of proof on the issue of infringement.

Standards of proof allocate the risk of error between the parties and indicate the relative importance of the ultimate question to be decided. *Huddleston*, 459 U.S. at 389. Proof by a preponderance of the evidence is the “standard generally applicable in civil actions” because it “allows both parties to ‘share the risk of error in roughly equal fashion.’” *Id.* at 390 (quoting *Addington v. Texas*, 441 U.S. 418, 423 (1979)). Unlike challenges to patent *validity*, which implicate the expert determinations of the PTO and the corresponding reliance interests of patentees, see *Microsoft*, 131 S. Ct. at 2249-2250, questions of patent *infringement* generally involve case-specific factual questions that have no broader ramifications for society as a whole. See *Addington*, 441 U.S. at 423 (explaining that the preponderance standard applies in most civil matters because “society has a minimal concern with the outcome” of a “typical civil case involving a monetary dispute between private parties”).

“Standards of proof, like other ‘procedural due process rules[,] are shaped by the risk of error inherent in the truth-finding process as applied to the *generality of cases*, not the rare exceptions.’” *Santosky v. Kramer*, 455 U.S. 745, 757 (1982) (quoting *Mathews v. Eldridge*, 424 U.S. 319, 344 (1976)) (alteration in original). Petitioner does not dispute that, in the vast majority of infringement suits, the issue of infringement can be resolved without casting doubt on the validity of any issued patent. The possibility of rare cases in which the two issues will be linked provides no justification for applying to infringement questions any standard of proof other than the preponderance standard that is traditionally used in civil litigation.

The heightened standard of proof that petitioner advocates would presumably apply only when a finding of infringement under the doctrine of equivalents would operate as “a *de facto* finding” (Pet. 18) that a later-issued patent was invalid. A variable standard of proof for patent infringement, however, would raise a host of practical difficulties. Under petitioner’s approach, the standard of proof would vary not only from case to case, but also within a single case. For example, if some elements of the accused device were alleged literally to satisfy claim limitations A, B, and C, and others were alleged to be equivalents of claim limitations D and E, the jury would be required under petitioner’s theory to apply different standards of proof to different limitations of the same claim in order to render a verdict on infringement.

It might also be difficult to determine in particular cases whether petitioner’s heightened standard applies. Here, it is undisputed that PET scanners using petitioner’s LYSO scintillating crystals are covered by the later-issued ’420 patent. In other cases, however, the parties may dispute whether the later-issued patent covers the allegedly infringing device. Under petitioner’s theory, the district court would then be obligated to construe the claims of a second patent simply to identify the standard of proof that applies in determining infringement of the first.

In rejecting a variable standard of proof for challenges to patent validity, this Court in *Microsoft* emphasized the need to avoid analogous practical burdens. See 131 S. Ct. at 2249-2251 & n.10. The petitioner in *Microsoft* contended that the standard of proof for invalidating a patent should depend on whether the evidence offered to demonstrate invalidity had been considered by



the PTO. See *id.* at 2249. This Court disagreed, reasoning that Congress would have spoken more clearly if it had intended “to take the unusual and impractical step of enacting a variable standard of proof that must itself be adjudicated in each case.” *Id.* at 2250. Likewise here, petitioner identifies no persuasive reason to adopt a variable standard of proof for patent infringement “that would rise and fall with the facts of each case.” *Ibid.*

3. This Court in *Microsoft* further explained that, rather than inject uncertainty into the legal formulation of the standard of proof, district courts could accommodate relevant factual variations in each case by instructing the jury on the weight that may be accorded to particular types of evidence. 131 S. Ct. at 2251. Under that approach, the standard of proof does not change, but certain types of evidence may “go further toward sustaining the [proponent’s] unchanging burden.” *Ibid.* (quoting *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360 (Fed. Cir.) (alteration in original), cert. denied, 469 U.S. 821 (1984)).

In the present context as well, appropriate instructions may help the jury assess the significance of a defendant’s contention that the allegedly infringing product or process is covered by a later-issued patent. Here, the district court instructed the jury that it could “consider that [petitioner] obtained the license under the [’420] patent, which may be some evidence that the differences between the 10% Y LYSO crystal[s] and the claimed LSO crystal[s] are substantial” for purpose of infringement under the doctrine of equivalents. Pet. App. 6a. That instruction was both appropriate and correct. As the court of appeals concluded, there was no need to

take the more drastic and disruptive step, rejected in *Microsoft*, of introducing a variable standard of proof.

**C. Petitioner’s Policy Arguments Do Not Suggest A Need For This Court’s Review**

Petitioner contends (Pet. 22-26) that this Court’s review is warranted because allowing the doctrine of equivalents to encompass separately-patented inventions “undermin[es] the notice function of patent claims, increas[es] uncertainty and litigation costs, and stiff[es] innovation.” Pet. 23. That argument lacks merit.

This Court has recognized that “the doctrine of equivalents renders the scope of patents less certain,” and that such uncertainty creates a risk that competing manufacturers “may invest by mistake in competing products that the patent secures.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki*, 535 U.S. 722, 732 (2002). Nevertheless, “[e]ach time the Court has considered the doctrine, it has acknowledged this uncertainty as the price of ensuring the appropriate incentives for innovation, and it has affirmed the doctrine over dissents that urged a more certain rule.” *Ibid.*

Petitioner contends (Pet. 24) that permitting the doctrine of equivalents to reach subject matter that is separately patented “vitiates competitors’ reasonable reliance” on the PTO’s determination that a later-arising technology is separately patentable. This Court held in *Warner-Jenkinson*, however, that the doctrine of equivalents applies to “after-arising equivalents.” 520 U.S. at 37. And, as explained above (pp. 14-17, *supra*), the PTO regularly and appropriately issues patents that cannot be practiced without infringing other, pre-existing patents. Because the PTO’s issuance of a patent signifies only that the invention satisfies the requirements of the

Patent Act, not that the invention may be practiced without infringing any earlier patents, imposition of infringement liability does not impair any “reasonable reliance” interest that the holder (or, in this case, licensee) of the later patent might possess.

Finally, petitioner offers no reason to believe that the question presented has arisen, or will arise in the future, with any significant frequency. The choice of a standard of proof in idiosyncratic cases like this one, where a device conceded to be covered by a later-issued patent is alleged to infringe an earlier patent under the doctrine of equivalents, is unlikely to alter the disposition of any meaningful number of infringement suits. Even if the correctness of the court of appeals’ decision were open to more substantial doubt, the decision would not meaningfully affect existing incentives to innovate.

#### CONCLUSION

The petition for a writ of certiorari should be denied.

Respectfully submitted.

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