No.

IN THE Supreme Court of the United States

EVE-USA, INC., SYNOPSYS EMULATION AND VERIFICATION, S.A.S., SYNOPSYS, INC.,

Petitioners,

v.

MENTOR GRAPHICS CORPORATION,

Respondent.

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

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. The Federal Circuit has carved out an exception in the Patent Act with a judge-made rule known as "assignor estoppel." Assignor estoppel precludes an inventor who has assigned her patent, and those in privity with her, from contesting the patent's validity in an infringement suit. The Patent Act has no such bar. And, this Court in *Lear, Inc. v. Adkins*, 395 U.S. 653 (1969), abolished the analogous doctrine of "licensee estoppel," which barred licensees from challenging the validity of patents they licensed, as contrary to the important public interest of eliminating invalid patents. The question is whether, and under what circumstances, assignors and their privies are free to contest a patent's validity.

2. This Court has long adhered to a rule requiring apportionment of damages: "When a patent is ... not for an entire [] ... machine or contrivance, the patentee must ... separate or apportion ... the patentee's damages between the patented feature and the unpatented features." Garretson v. Clark, 111 U.S. 120, 121 (1884). In Garretson and multiple other cases, this Court applied that rule to damages in the form of lost profits. The Federal Circuit, however, permits patentees to recover lost profits damages for an entire multicomponent product, without apportioning the value between patented and unpatented features, simply by showing that the patentee would have made the sale "but for" the infringement. Pet. App. 22a. Did the Federal Circuit err in holding that proof of but-for causation, without more, satisfies the requirement that damages be apportioned between patented and unpatented features?

CORPORATE DISCLOSURE STATEMENT

Petitioner Synopsys, Inc. has no parent corporation. The Vanguard Group owns more than 10% of Synopsys stock.

EVE-USA, Inc. is a wholly owned subsidiary of Synopsys, Inc.

Synopsys Emulation and Verification S.A.S. is owned by Synopsys Global Licensing and Distribution Limited Liability Company. Synopsys Global Licensing and Distribution Limited Liability Company is owned by Synopsys Ireland Limited. Synopsys Ireland Limited is owned by Synopsys, Inc.

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INTRODUCTION

This case presents two cert-worthy patent issues—both foundational, both far-reaching. While each issue is distinct and independent, their origin is the same. Each is representative of a methodological problem in a circuit that continues to stray from the language Congress wrote and to ignore this Court's direction. The result is a decision that betrays the Patent Act that Congress enacted and contravenes this Court's precedent.

I. The liability principle at issue is elementary: You cannot extract monopoly rents on an invalid patent. The Patent Act says it explicitly—and categorically: It authorizes the accused infringer to raise the "[i]nvalidity of the patent" as a "defense[] in any action involving the validity or infringement of a patent." 35 U.S.C. § 282(b), (b)(2). It does not disqualify some categories of accused infringers from asserting these standard legal defenses.

Here, however, the Federal Circuit grafted onto the statute Congress wrote a judge-made exception assignor estoppel—which prohibits anyone who assigns patent rights from later contending that the patent is invalid. Assignor estoppel is motivated by the equities at play when an inventor obtains a patent from the Patent and Trademark Office, represents to a buyer that the patent is valuable, sells the patent rights to that buyer for a lot of money in an arm's length transaction, and then persuades a court that what was sold for value was invalid and worthless. Assignor estoppel thereby invokes private contractual interests to override both explicit statutory language and clear public policy favoring the elimination of invalid patents that inhibit free competition.

The equities on which assignor estoppel is premised do not apply in the modern economy where assignments often occur because employers require their employees to sign an employment agreement agreeing to assign all patent rights to their employer for any invention they later invent as an employee. The Federal Circuit's assignor-estoppel doctrine nevertheless strips those employees of a key defense to infringement suits when they continue their life's work years after leaving the employer. Worse, anyone who hires that employee also jeopardizes the defense under principles of privity. The present-day doctrine can no longer be defended based on its original equitable justifications.

If the Federal Circuit followed this Court's guidance, it would have abandoned assignor estoppel long ago. In Lear, Inc. v. Adkins, 395 U.S. 653 (1969), this Court rejected the doctrine's cousin, licensee estoppel. Both brands of estoppel are rooted in contract equities, and this Court held that private contractual equities cannot outweigh "the important public interest in permitting full and free competition" through the elimination of invalid patents. Id. at 670. Lear went out of its way to mention that this Court's precedents had cut the doctrinal legs out from under assignor estoppel. In the wake of *Lear*, courts such as the Ninth Circuit (before the Federal Circuit's creation) recognized that assignor estoppel was dead. Yet, the Federal Circuit departed from those courts, resuscitated the zombie doctrine, and, for decades since, has expanded assignor estoppel far beyond even the origins

this Court already renounced. Now, the Federal Circuit blames this Court and claims to be powerless to abandon the doctrine.

Only this Court can put an end to assignor estoppel.

II. The damages principle at issue is that patent damages are limited to the value of the invention. Here, however, the Federal Circuit authorized the patentee to get a whole lot more: the entire value of a multi-component product containing the invention.

In so doing, the Federal Circuit contravened the directive this Court has repeated in numerous decisions stretching back 150 years: All patent damages including lost-profits damages—must separate out the value attributable to features other than the patented feature. Yet, the Federal Circuit has abandoned that apportionment principle. The panel announced a new rule that apportionment of lost profits is automatically satisfied merely because a patentee shows it would have made certain sales but for a defendant's infringement, even though those sales are also driven by other features besides the patented one.

As Judge Dyk explained in dissenting from the denial of rehearing en banc, that holding is "contrary to longstanding Supreme Court authority": This Court's "patent cases make quite clear that more than but-for causation is required for apportionment." Pet. App. 70a-71a, 73a. The Federal Circuit's erroneous damages holding will have far-reaching consequences: "[T]he result here is that true apportionment will never be required for lost profits." Pet. App, 77a-78a.

These two holdings are both foundational and farreaching. They both require this Court to repeat twice more the message it has been issuing with increasing frequency to the Federal Circuit: Adhere to the language of the Patent Act and follow this Court's precedents.

OPINIONS AND ORDERS BELOW

The Federal Circuit's decision is reported at 851 F.3d 1275 and reproduced at Pet. App. 1a-48a. The order denying rehearing en banc and the accompanying opinions are reported at 870 F.3d 1298 and reproduced at Pet. App. 63a-84a. The district court's grant of summary judgment on assignor estoppel and denial of post-trial motions regarding damages are unreported and are reproduced at Pet. App. 49a-61a, 62a.

JURISDICTION

The Federal Circuit entered judgment on March 16, 2017. On September 1, 2017, that court denied Synopsys' timely petition for rehearing en banc. Pet. App. 65a. This Court has jurisdiction under 28 U.S.C. § 1254(1).

STATUTORY PROVISIONS INVOLVED

Section 282(b) of the Patent Act, 35 U.S.C. § 282(b), provides:

(b) Defenses. — The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

(1) Noninfringement, absence of liability for infringement or unenforceability.

(2) Invalidity of the patent or any claim in suit on any ground specified in part II as a condition for patentability.

(3) Invalidity of the patent or any claim in suit for failure to comply with —

(A) any requirement of section 112, except that the failure to disclose the best mode shall not be a basis on which any claim of a patent may be canceled or held invalid or otherwise unenforceable; or

(B) any requirement of section 251.

(4) Any other fact or act made a defense by this title.

Section 284 of the Patent Act, 35 U.S.C. § 284, provides in relevant part:

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

STATEMENT OF THE CASE

Synopsys Is An Industry Leader In Designing Products To Test And Fix Microchip Designs

This case is about technology used to make the digital world function better—specifically, to design microchips and confirm that they work. Petitioners (collectively, "Synopsys") have long helped major companies test their microchip designs to detect and fix flaws (or "bugs"). There are many techniques for testing chip designs; the one at issue here is called "emulation."

Emulation is a complicated process. Sophisticated machines called emulators, which consist of many hardware and software features and components, produce working physical replicas of microchips and test them quickly and efficiently. Emulators are physically massive. They contain thousands of hardware and software features and can cost millions of dollars. Ct. of Appeals App'x ("C.A.") A35,066-67. They include so many functions and features that Respondent Mentor Graphics Corp. itself has over 100 patents covering emulation. C.A. A26,567. The patent at issue here, U.S. Patent No. 6,240,376 (the '376 patent), relates to one particular-and guite technical-method that identifies what portions of the chip's source code were tested so the engineer can locate and fix bugs. Pet. App. 6a-7a.

Synopsys Acquires A Company Founded By A Former Mentor Employee, And Mentor Sues For Patent Infringement

At the heart of this patent dispute is a classic story of employee mobility of the sort that is increasingly becoming the lifeblood of the tech sector. In the 1990s, two computer scientists—Luc Burgun and Alain Raynaud—developed an approach for debugging that could be added to the long list of other debugging capabilities already available on emulators. At the time, Burgun and Raynaud were employees at Mentor, and so when they applied for a patent, they assigned their rights in the patent application to Mentor. C.A. A1571. The application eventually issued as the '376 patent.

Before the application matured into the '376 patent, Burgun left Mentor to found his own start-up company, EVE. EVE began as a services and consulting company, but given Burgun's emulation expertise, it eventually entered the emulation market. EVE designed and sold smaller, less power-intensive, and "cheaper" emulators that were nevertheless "faster" and had "higher capacity" to test "any" chip design. C.A. A41,377. Mentor sued EVE for patent infringement. That suit ended when EVE took a license to Mentor's patents, including the '376 patent. That license would terminate if a major competitor of Mentor's acquired EVE. Pet. App. 4a-5a.

That scenario came to pass in 2012 when Synopsys acquired EVE, and Burgun became a Synopsys employee. Mentor got wind of the deal before it closed and threatened suit. So around the time of the merger, Synopsys filed a declaratory judgment action, asking the district court to find invalid and not infringed several Mentor patents, including the '376 patent. Mentor responded by accusing Synopsys of infringement.

With regard to the '376 patent, the only patent at issue in this petition, Mentor accused just two of the thousands of features of Synopsys' emulators: flexible and value-change probes. Those probes are used to debug chips that are being tested. When a chip is tested, it generates digital signals—typically a 1 or a 0. These probes allow a chip designer to view not just the final signals, but also to see internal signals along the way. Pet. App. 6a-7a.

By Mentor's own admission, debug visibility represents just one of many factors that drive the purchasing decisions of emulator customers. C.A. A26,584. Synopsys' emulators contain many features—even many other debugging features—beyond the two accused probes, including two additional types of probes as well as a variety of triggers, checkers, and other tools that assist with detecting and isolating design bugs. C.A. A35,066-67, 41,895, 46,224. And debugging is only one of the factors that purchasers consider in deciding which emulator to buy. Both parties' experts agreed that as many as 13 "key" emulator features may drive demand. C.A. A26,584, 35,064.

The District Court Precludes Synopsys From Challenging Validity, And Upholds An Unapportioned Lost Profits Award

1. Synopsys had strong defenses to Mentor's patent infringement claims, most notably various arguments that the '376 patent was invalid. The district court never considered any invalidity arguments on the merits. It discarded all of them on summary judgment on the basis of assignor estoppel. Pet. App. 62a. Of course, Synopsys did not invent the '376 patent or assign it to Mentor. But a line of Federal Circuit cases compelled the conclusion that Burgun was barred from contesting the '376 patent's validity and so, too, was anyone in privity with him, including his thencurrent employer, Synopsys. See, e.g., Diamond Sci. Co. v. Ambico, Inc., 848 F.2d 1220 (Fed. Cir.), cert. pet. voluntarily dismissed, 487 U.S. 1265 (1988).

2. On damages, the district court careened from one position to another, grumbling along the way that the Federal Circuit's law on lost profits and apportionment is a "hot mess." C.A. A41,996-97. As relevant here, Mentor sought lost profits on the theory that, but for the fact that Synopsys' emulator contains the allegedly infringing probes, customers would have purchased Mentor's emulator. *See* Pet. App. 16a-18a. At summary judgment, the district court held that Mentor must apportion its lost profits damages to the value of the accused features, and could not obtain damages on the emulators as a whole. C.A. A128. But, at the final pre-trial conference, the court reversed course, announcing that if Mentor was "successful proving 'but for' causation," then Mentor "is not obligated to show apportionment" of the lost profits it claimed on diverted emulator sales. C.A. A40,538.

At trial, the court likewise precluded Synopsys from arguing that Mentor was not entitled to the lost profits as to features other than the allegedly infringing probes. The court was absolutely explicit that this would be apportionment, which was not allowed: "What's not appropriate is to say that 90 percent of the purchase price really had nothing to do with the patented feature. That's apportionment. You can't do that ... on lost profits." C.A. A42,241. The court's jury instructions permitted Mentor to recover lost profits for the full value of the emulators as long as Mentor demonstrated that Synopsys' infringement caused Mentor to lose emulator sales. C.A. A163-64.

In ruling on post-trial motions, the district court recognized it had made "an error in the trial" in its damages instructions—specifically, that it should have told the jury that Mentor could not obtain unapportioned lost profits unless it found that Mentor had satisfied an exception to apportionment known as the entire market value rule ("EMVR"). C.A. A42,600; *see infra* 26-27. But the court declined to order a retrial, concluding that its error was harmless. Pet. App. 60a-61a. In the court's view, Mentor had proven EMVR even though the jury was never instructed about EMVR and despite Mentor's repeated disavowals of any intention to prove EMVR, C.A. A41,403, 41,517, 41,523-25, 41,741. In the end, the jury found Synopsys liable for infringement and awarded lost-profits damages totaling \$36,417,661, plus a reasonable royalty of \$242,110. C.A. A187.

The Federal Circuit Upholds Relevant Portions Of The Verdict

On appeal, Synopsys noted that the Federal Circuit's doctrine of assignor estoppel is contrary to this Court's precedents and federal patent policy. C.A. Op. Br. 41-43. But Synopsys acknowledged that there was nothing the panel could do about that and was simply preserving the argument "for further review." *Id.* The panel agreed that prior precedent foreclosed any validity challenge. Pet. App. 9a.

On lost profits, the "hot mess" got messier. Mentor's main argument for affirming the damages award was that "lost profits should not be apportioned." Mentor C.A. Princ. Br. 32. The panel disagreed, purporting to accept that the "basic principle of apportionment ... applies in all of patent damages." Pet. App. 10a-11a n.3. But the panel affirmed anyway. It held that Mentor had satisfied the apportionment requirement—without intending or feeling the need to do so. Pet. App. 13a-20a.

Specifically, the panel found a proxy for apportionment in some of the elements of proving but-for causation. The Federal Circuit follows the but-for standard recited in *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978), as one way to prove but-for causation. *Panduit* requires a patentee to "prove demand for the product as a whole and the absence of non-infringing alternatives." Pet. App. 19a-20a. And that, the panel thought, "ties lost profit damages to specific claim limitations and ensures that damages are commensurate with the value of the patented features." *Id.* In other words, "when the *Panduit* factors are met, they incorporate into their very analysis the value properly attributed to the patented feature." Pet. App. 25a. Thus, even though the jury was not instructed about apportionment, the panel concluded that "the district court did not err in refusing to further apportion lost profits after the jury returned its verdict applying the *Panduit* factors." *Id.*

A Sharply Divided Court Denies Rehearing En Banc

Synopsys petitioned for rehearing en banc, which the Federal Circuit denied in an order accompanied by multiple separate opinions. Pet. App. 63a-84a.

With regard to assignor estoppel, two members of the three-judge panel separately concurred in the denial of panel rehearing. Pet. App. 79a-84a. Judges Moore and Chen allowed that they "may be inclined to reconsider the breadth of the doctrine of assignor estoppel." Pet. App. 80a. But, they concluded, the Federal Circuit is "precluded" from deciding whether assignor estoppel should be "abolish[ed] or not" because they viewed a decision of this Court, which had cut back assignor estoppel, as implicitly adopting the doctrine. Pet. App. 80a-83a (discussing *Westinghouse Elec. & Mfg. Co. v. Formica Insulation Co.*, 266 U.S. 342 (1924)). In their view, no matter how much the Federal Circuit may have wanted to abolish assignor estoppel, it was "bound by this precedent" and could not "do[] away with the doctrine in its entirety," even if it "appear[ed] to rest on reasons rejected in some other line of decisions." Pet. App. 82a-83a (citation omitted).

The Federal Circuit also denied en banc review of the panel's damages ruling over the dueling opinions of eight judges. Judge Stoll concurred in the denial of rehearing, in an opinion signed by five other judges (including Judge Moore, the panel opinion's author). Like the panel, Judge Stoll accepted that damages measured by a lost-profits theory must be apportioned. Pet. App. 67a. But Judge Stoll went on to defend the award, as the district court had done posttrial, on the theory that Mentor had proven the EMVR exception to apportionment, even though Mentor disclaimed that theory at trial, the jury was never instructed on it, and the panel opinion never discussed it. Pet. App. 67a-69a.

Judge Dyk, joined by Judge Hughes, issued a pointed dissent. Judge Dyk documented how the panel's decision was "contrary to longstanding Supreme Court authority." Pet. App. 70a-71a. The panel, he explained, erroneously held that "when lost profits are awarded for patent infringement, there is no requirement for apportionment between patented and unpatented features." *Id.* That is because the *Panduit* test does not actually accomplish apportionment. It may help to determine whether the patentee establishes but-for causation, but "the Supreme Court's patent cases make quite clear that more than but-for causation is required for apportionment" of patented and unpatented features. Pet. App. 73a. The panel's conflation of but-for causation and apportionment is also illogical, Judge Dyk explained: "[E]ven if 'but for' a patented feature the item would not have been purchased, it could be equally true that but for an unpatented feature (or a feature covered by another patent) the item would not have been purchased [either]." Pet. App. 75a. Nor is this an issue of only passing concern: "[A]pportionment is an important issue that will likely arise in every future lost profits case." Pet. App. 76a. And, because "satisfy[ing] the *Panduit* factors [is] a necessary predicate for lost profits, the result here is that true apportionment will never be required for lost profits." Pet. App. 77a-78a.

REASONS FOR GRANTING THE PETITION

I. The Court Should Grant The Petition And Overrule The Federal Circuit's Assignor Estoppel Doctrine Once And For All.

Assignor estoppel prevents inventors who assign their patents or patent applications—and anyone deemed to be in privity with the inventor—from challenging the validity of those patents in district court. This Court should abolish the doctrine because it is atextual, inconsistent with this Court's reasoning in *Lear*, an improper judicial expansion of the patent monopoly, and a barrier to free competition and employee mobility. § I.A. The Federal Circuit has so dramatically expanded assignor estoppel that the original rationale for the doctrine can no longer justify its continued existence. § I.B. This case presents a perfect vehicle for this Court to consider assignor estoppel. § I.C.

A. Assignor estoppel contravenes the Patent Act and this Court's directives while undermining free competition and employee mobility.

1. "This Court has more than once cautioned that courts should not read into the patent laws limitations and conditions which the legislature has not expressed." Bilski v. Kappos, 561 U.S. 593, 602-03 (2010) (quotation marks omitted). It has repeatedly rejected the Federal Circuit's efforts to craft such atextual limitations or embellishments, particularly rules adopted in the name of equity. E.g., SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC, 137 S. Ct. 954, 967 (2017) (laches for patent damages claims brought within the statute of limitations); Bilski, 561 U.S. at 602-04 (atextual limitations on what qualifies as a patentable process); Halo Elecs., Inc. v. Pulse Elecs., Inc., 136 S. Ct. 1923, 1931-34 (2016) (extra-statutory bifurcated test for enhanced damages); Octane Fitness, LLC v. ICON Health & Fitness, Inc., 134 S. Ct. 1749, 1755-58 (2014) (non-statutory framework for attorneys' fees).

This case presents just the latest example. Assignor estoppel is a judge-made rule premised on the idea that private contractual equities (such as consideration and fair dealing) justify precluding the inventor from contesting the patent's validity. It singles out a class of parties who cannot raise invalidity defenses in district court. But nothing in the text of the Patent Act enacts assignor estoppel or incapacitates an assignor from challenging the validity of a patent. Quite the opposite: The Patent Act permits a party to raise the "[i]nvalidity of the patent or any [patent] claim" as a defense "in *any* action involving the validity or infringement of a patent" in district court. 35 U.S.C. § 282(b), (b)(2) (emphasis added).

Since the Federal Circuit believes this Court has mandated assignor estoppel, Pet. App. 82a-83a, this Court must again step in to provide the course correction.

2. For decades, courts and observers had thought that this Court had already provided the course correction when it abolished the analogous doctrine of *li*censee estoppel. As noted above (at 2), licensee estoppel barred a party that took a license to a patent from challenging that patent's validity. Automatic Radio Mfg. Co. v. Hazeltine Research, Inc., 339 U.S. 827, 836 (1950). The equity-based rationale for licensee estoppel was essentially the same as the rationale for assignor estoppel: that it is unfair for "a licensee ... to enjoy the benefit afforded by the agreement while simultaneously urging that the patent which forms the basis of the agreement is void." Lear, 395 U.S. at 656 (quotation marks omitted). This Court rejected that rule because contractual "equities ... do not weigh very heavily when they are balanced against the important public interest in permitting full and free competition" by eliminating invalid patents. *Id.* at 670.

Lear recognized "the competing demands of the common law of contracts and the federal law of patents." *Id.* at 668. On one hand, contract law "forbids a purchaser to repudiate his promises simply because he later becomes dissatisfied with the bargain he has

made," and thus, "[u]nder ordinary contract principles[,] the mere fact that some benefit is received is enough to require the enforcement of the contract, regardless of the validity of the underlying patent." *Id.* at 668-69. On the other hand, it is "important" that "competition should not be repressed by worthless patents," lest "the public may continually be required to pay tribute to the would-be monopolists without need or justification." *Id.* at 664, 670 (citation omitted). The "strong federal policy favoring the full and free use of ideas in the public domain" carried the day, along with the "importan[ce] to the public that competition should not be repressed by worthless patents." *Id.* at 664, 674 (quoting *Pope Mfg. Co. v. Gormully*, 144 U.S. 224, 234 (1892)).

The same analysis applies to assignor estoppel, which also is premised on private contractual equities. See Diamond Sci., 848 F.2d at 1224. But the "important public interest" in eliminating invalid patents, Lear, 395 U.S. at 670, applies just as forcefully whether the party challenging the patent is a licensee or assignor. In fact, *Lear* treated the brands of estoppel as doctrinally equivalent. In rejecting the view that estoppel-licensee or assignor-was "the general rule," the Court traced the history of both doctrines. Id. at 664-67 (quotation marks omitted). Before abolishing licensee estoppel, this Court felt it necessary to point out that it had repeatedly adopted "exception[s] that undermined the very basis" for assignor estoppel. Id. at 666 (discussing Westinghouse, 266 U.S. at 350-51; Scott Paper Co. v. Marcalus Mfg. Co., 326 U.S. 249, 257 (1945)).

In the wake of *Lear*, the Ninth Circuit declared assignor estoppel dead. *Coastal Dynamics Corp. v. Symbolic Displays, Inc.*, 469 F.2d 79 (9th Cir. 1972). Other courts followed suit. *See Diamond Sci.*, 848 F.2d at 1223 (collecting cases).

The academic community agreed. See, e.g., Mark A. Lemley, Rethinking Assignor Estoppel, 54 Hous. L. Rev. 513, 529 (2016); Donald Steinberg and David Chavous, Supreme Court Review of Patent Cases: What Will Follow eBay, MedImmune, and KSR?, 8 J. High Tech. L. 185, 198 (2008); Lara J. Hodgson, Assignor Estoppel: Fairness At What Price?, 20 Santa Clara Computer & High Tech. L.J. 797, 814 (Mar. 2004); Franklin D. Ubell, Assignor Estoppel: A Wrong Turn from Lear, 71 J. Pat. & Trademark Off. Soc'y 26 (1989).

So did Congress. It heard testimony from numerous witnesses agreeing that *Lear* "completely overruled" assignor estoppel by "logical extension." *Patent Law Revision: Hearings Before the Subcomm. on Patents, Trademarks, and Copyrights of the S. Comm. on the Judiciary*, 92nd Cong. 218 (1971) (Chamber of Commerce); *id.* at 231 (Undersecretary of Commerce); *id.* at 383 (American Patent Law Association). Congress considered, but ultimately rejected, a bill to reinstate a limited version of assignor and licensee estoppel. *Id.* at 176. And Congress has taken no action since to reinstate assignor or licensee estoppel.

3. *Lear*'s emphasis on these "overriding federal policies" was not new. This Court "has repeatedly recognized that the public interest in free competition, unencumbered by invalid patent monopolies, can

overcome traditional equitable considerations." Roger Allan Ford, Patent Invalidity Versus Noninfringement, 99 Cornell L. Rev. 71, 126 (2013). As Lear documented, this Court has a long history of rejecting rules that interfere with a party's ability to challenge otherwise "specious patents" that impede "full and free competition," 395 U.S. at 670, 673-74 & n.19. See, e.g., Pope Mfg., 144 U.S. at 236-37 (refusing to enforce contract in which defendant promised not to contest patent's validity); Edward Katzinger Co. v. Chicago Metallic Mfg. Co., 329 U.S. 394, 401-02 (1947) ("[A] contract not to challenge the validity of [the] patent can no more override congressional policy than can an implied estoppel."); Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225, 230-31 (1964) (holding state law cannot prohibit practicing an invention that is in the public domain). Thus, this Court long ago recognized that invalidating bad patents is of such profound public importance that "the right to make the [invalidity] defense is not only a private right to the individual. but it is founded on public policy, which is promoted by his making the defense, and contravened by his refusal to make it." Pope Mfg., 144 U.S. at 235.

In the intervening decades, this Court has doubled down on this imperative, observing that "[a]llowing even a single company to restrict its use of an ... invalid patent ... would deprive the consuming public of the advantage to be derived from free exploitation of the discovery" and thus "impermissibly undermine the patent laws." *Kimble v. Marvel Entm't, LLC*, 135 S. Ct. 2401, 2407 (2015) (quotation marks and ellipsis omitted); *see MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118, 135 (2007) (holding licensee need not repudiate license before challenging patent's validity).

Justice Douglas emphasized in his dissent in *Hazeltine Research*—before that decision was overruled by *Lear*—"[W]hat worse enlargement of monopoly is there than the attachment of a patent to an unpatentable article? When we consider the constitutional standard, what greater public harm than that is there in the patent system?" 339 U.S. at 839. That concern was prescient: By 2010, invalid patents cost the economy \$25 billion annually. T. Randolph Beard, et al., *Quantifying the Cost of Substandard Patents: Some Preliminary Evidence*, 12 Yale J. L. & Tech. 240, 268 (2010). Assignor estoppel is exacting real costs while providing an unintended expansion of the patent monopoly.

4. The modern workplace renders assignor estoppel even more problematic now than it was when this Court decided *Lear* because it impedes inventors' freedom to move from job to job. Today, the paperwork an employee completes on her first day of work commonly includes an agreement to assign future inventions to her employer. Lemley, *supra*, at 525 n.65. Employees sign such agreements before inventing anything and receive no compensation beyond their salary for the assignment. Hodgson, *supra*, at 827-28.

Because these assignments are a standard part of employment, and often executed before invention, the employee is not making any representations to her employer about the patent-worthiness of the invention, nor is the employer purchasing the invention based on any such representations or in exchange for consideration. These modern realities bear no relation to the traditional justifications for assignor estoppel: that it is unfair and unscrupulous to sell something, represent its worth, take the money, and then argue that the thing sold was actually worthless. Lemley, *supra*, at 525-27. But that fairness rationale cannot hold up to contemporary patent litigation, where an assignor is not permitted to challenge the patent's validity in district court, but is permitted to challenge the same patent's validity in administrative proceedings before the Patent and Trademark Office, such as in inter partes reviews. *See Husky Injection Molding Sys. Ltd. v. Athena Automation Ltd.*, 838 F.3d 1236, 1246-47 (Fed. Cir. 2016).

At the same time, the inventor-assignor is effectively saddled with "a partial noncompete agreement" if she wants to move to a new employer. Lemley, *supra*, at 537. The inventor-assignor's new employer operates "at a significant disadvantage," unable "to effectively defend a patent lawsuit filed" by the former employer. *Id*. The risk that a company may be forced to defend a potential bet-the-company patent suit with one hand tied behind its back may make it almost impossible for an inventor to switch jobs within her field of expertise. Such limits on employee mobility "interfere[] with innovation and economic growth." *Id*. at 538.

B. The Federal Circuit has dramatically expanded assignor estoppel in the face of this Court's precedents, far beyond any rationale for the doctrine.

When the Federal Circuit first revived assignor estoppel, it acknowledged that "the [Supreme] Court's previous [i.e., pre-*Lear*] decisions had sapped much of the vitality, if not the logic, from the assignment estoppel doctrine." *Diamond Sci*, 848 F.2d at 1223. Yet, in a line of 15 mostly published cases, the Federal Circuit has expanded this doctrine far beyond anything this Court had ever imagined or condoned. Lemley, *supra*, at 519-24 (recounting Federal Circuit's expansion of assignor estoppel).

The classic scenario that originally motivated the equitable concerns underpinning assignor estoppel was where an inventor (1) secured a patent; (2) represented to a buyer that the patent is valuable; (3) sold the patent rights at a high price to that buyer in an arm's length transaction; only to (4) turn around and persuade a court that what they sold was worthless.

The Federal Circuit's version of the rule encompasses scenarios bearing no resemblance to the paradigmatic case. It first expanded assignor estoppel to block not just assignors but those in privity with them. Diamond Sci., 848 F.2d at 1224. "Privity" quickly grew to include a company that hired the assignor, Shamrock Techs., Inc. v. Medical Sterilization, Inc., 903 F.2d 789, 793-96 (Fed. Cir. 1990), a company engaged in a joint venture with the assignor's company, Intel Corp. v. ITC, 946 F.2d 821, 839 (Fed. Cir. 1991), a subsidiary of the company employing the assignor, Mentor Graphics Corp. v. Quickturn Design Sys., Inc., 150 F.3d 1374, 1376-77 (Fed. Cir. 1998), and potentially companies contracting with the assignor, Checkpoint Sys., Inc. v. All-Tag Sec. S.A., 412 F.3d 1331, 1337 (Fed. Cir. 2005).

The Federal Circuit so unmoored the doctrine from its roots in equity and contractual principles that it no longer requires that the assignment be in exchange for valuable consideration beyond the employee's salary, Carroll Touch, Inc. v. Electro Mechanical Systems, Inc., 15 F.3d 1573, 1580-81 (Fed. Cir. 1993), nor does it limit estoppel to assignors who made affirmative representations to the assignee about the validity of the patent, Shamrock, 903 F.2d at 793; Q.G. Prods., Inc. v. Shorty, Inc., 992 F.2d 1211, 1214 (Fed. Cir. 1993); compare Westinghouse, 266 U.S. at 352-53 (assignment of patent application, rather than issued patent, may further undermine assignor estoppel) with Diamond Sci., 848 F.2d at 1224 (estoppel applies to assignments of "patent application[s]"). A company is even precluded from challenging the validity of the patent in defense of a product it developed before the inventor-assignor was hired. MAG Aerospace Indus. v. B/E Aerospace, Inc., 816 F.3d 1374, 1380 (Fed. Cir. 2016).

The contrast to the original doctrine could not be starker. While this Court took every opportunity to cut back the scope of assignor estoppel in the years leading up to *Lear*, the Federal Circuit has "never once refused to apply the doctrine." Lemley, *supra*, at 524. The Federal Circuit's zombie reincarnation of assignor estoppel has strayed so far from its origins that it simply cannot be sustained on the basis on which it was originally justified. This Court should step in and put an end to this run-away doctrine.

C. This case presents an ideal vehicle for this Court to address assignor estoppel.

This case is just the right one for considering the validity of assignor estoppel: Synopsys was barred

from raising its validity defenses solely because of assignor estoppel.

Judge Moore's concurrence in the denial of panel rehearing tried to erect two obstacles to review. First, it points out that Synopsys spent only "one page of its [panel] brief" on assignor estoppel. Pet. App. 80a. In that one page, Synopsys pointed out that circuit precedent squarely foreclosed any argument that assignor estoppel was abolished and noted that Synopsys was merely preserving the issue for further review. Given that the panel could not overrule circuit precedent and the concurrence says that even the en banc court lacked the authority to decide the question, Pet. App. 80a-84a—Synopsys need not have raised the issue at all. There was certainly nothing more Synopsys needed to say. MedImmune, 549 U.S. at 125 ("That petitioner limited its ... argument[s] to a few pages of its appellate brief does not suggest a waiver; it merely reflects counsel's sound assessment that the argument would be futile" based on "[c]ircuit[] ... precedent.").

In a related vein, the concurrence contended that this case is "not a proper vehicle" "to reconsider *the breadth* of the doctrine of assignor estoppel," because Synopsys did not ask the panel to narrow the doctrine. Pet. App. 80a (emphasis added). Even if that were correct, it would not stand in the way of this Court considering the core question Synopsys presents here: Whether assignor estoppel should be "abolish[ed] or not." *Id.* It bears noting, however, that the concurrence is mistaken: The 15 published Federal Circuit cases (many of which are recounted above) blocked Synopsys from challenging the ways in which the Federal Circuit expanded the doctrine beyond the paradigmatic scenario on which assignor estoppel was originally premised. Synopsys argued below that assignor estoppel should be abolished, and is not making a single argument to this Court that the panel had the power to decide.

II. The Court Should Grant Certiorari To Reestablish That Damages Must Be Apportioned To The Value Of The Patented Feature.

On the first question presented, the Federal Circuit defied a precedent that was 50 years old. Its damages ruling triples down by defying over 150 years of precedent. That is how long this Court has reiterated the imperative that patent damages must be limited to the value of the patented feature. The decision below will make unapportioned awards mandatory in all lost profits cases, giving windfall awards to patentees for profits that far exceed their inventive contribution. For this reason too, the petition should be granted.¹

A. This Court's decisions limit damages to the value of the patented invention.

There are two types of compensatory damages available for patent infringement: (1) the amount an infringer would have reasonably paid to take a license

¹ A reversal on the first question presented will not moot the damages issue. It would merely free Synopsys to litigate its invalidity defenses in the district court.

to the patent ("reasonable royalty") and (2) the profits the patentee would have made but lost because of the infringement ("lost profits"). This case involves lostprofits damages, which, like reasonable royalties, are designed to afford the patentee "damages adequate to compensate [it] for the infringement." 35 U.S.C. § 284. Section 284 tracks this Court's decisions setting a patentee's compensatory damages as "the value of what was taken"—which is to say, the value of the patent right found to have been infringed. *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 648 (1915).

Determining the value of the patent is straightforward when the patent covers an infringer's entire product: all the patentee's profits on lost sales of its competing product. But the rule is different when, as here, the "patent is for an improvement, and not for an entirely new machine or contrivance." Garretson v. Clark, 111 U.S. 120, 121 (1884). Under those circumstances, this Court has established the following rule to determine the value of what was taken: "The patentee ... must in every case give evidence tending to separate or apportion ... the patentee's damages between the patented feature and the unpatented features[.]" Id. (quotation marks omitted). The Court also identified an exception: The patentee can be awarded unapportioned lost profits "calculated on the whole machine," but only if the patentee shows that "the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature." Id. (quotation marks omitted). This "narrow exception to [the] general rule" of apportionment has come to be known as the entire market value rule ("EMVR"). LaserDynamics, Inc. v. Quanta Computer, Inc., 694 F.3d 51, 67 (Fed. Cir. 2012).

The question here involves apportionment. EMVR is significant, however, because, among other faults, the Federal Circuit's new rule swallows that exception. *Infra* 35-36.

On the core question of apportionment, there should have been no confusion about the proper rule. This Court has repeatedly applied the apportionment principle for all patent damages, including in lostprofits cases indistinguishable from this one. *Garretson* held that a patentee could collect only nominal damages for infringing a patented "improvement in the construction of mop-heads," because the patentee "produced no evidence to apportion the ... damages between the improvement constituting the patented feature and the other features of the mop." 111 U.S. at 121.

Seymour v. McCormick, 57 U.S. 480 (1854), involved patents for improvements to a crop reaper, which were infringed by the patentee's competitors. The trial court in Seymour instructed the jury that "as to the measure of damages the same rule is to govern, whether the patent covers an entire machine or an improvement on a machine." Id. at 491 (quotation marks omitted). This Court declared that instruction to be a "very grave error" because the patent was for only an "improvement of small importance when compared with the whole machine." Id. Seymour instead required apportionment of "the profits which in judgment of law [the patentee] would have made, provided the defendants had not interfered with his rights." Id. at 486. In Yale Lock Manufacturing Co. v. Sargent, 117 U.S. 536, 553 (1886), the Court affirmed a special master's lost-profits calculations for infringement of patented improvements to a combination lock in which a "proper deduction was made" for other features covered by different patents not at issue. The Court emphasized that the lost profits award "made proper allowances for all other causes which could have affected the plaintiff's prices," even though the patented component "was the essential feature" of the plaintiff's lock. Id. Similarly, in Blake v. Robertson, 94 U.S. 728, 734 (1877), the Court sustained an award limited to nominal damages because the patentee failed to show "how much of [his] profit was due to ... other patents" embodied in the machine that he sold.

As these cases demonstrate, this Court's apportionment rule ensures that the "damages awarded for patent infringement must reflect the value attributable to the infringing features of the product, and no more." *CSIRO v. Cisco Sys., Inc.*, 809 F.3d 1295, 1301 (Fed. Cir. 2015) (quotation marks omitted), *cert. denied*, 136 S. Ct. 2530 (2016). The rule remains in force today, and, as the panel, concurring, and dissenting judges all agreed—or at least purported to agree: Apportionment "is an important component of damages law ... necessary in both reasonable royalty and lost profits analysis." Pet. App. 19a (panel); *accord* Pet. App. 67a; Pet. App. 71a.

B. The decision below contravenes this Court's precedents.

1. The Federal Circuit erred in a fundamental way, with far-reaching consequences, by overlooking

that a patentee is entitled to compensation only for "the value of what was taken" through the infringement. *Dowagiac*, 235 U.S. at 648. The figure "to be measured is only the value of the infringing *features* of an accused product," *Ericsson Inc. v. D-Link Sys.*, *Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014) (emphasis added), not the product as a whole. Accordingly, a lost-profits award must "separate ... the patentee's damages between the patented feature and the unpatented features." *Garretson*, 111 U.S. at 121.

The panel, however, paid only lip service to Garretson, Seymour, Yale Lock, and Blake, distinguishing them as "apply[ing] to a different damages regime." Pet. App. 10a-11a n.3. That is incorrect. Each of those cases involved patentees seeking lost profits for infringement of patents that, like Mentor's here, were mere improvements on a product but not the entire product. And, the patent statutes in existence then authorized the recovery of lost profits as "actual damages sustained [by the plaintiff]," Patent Act of 1870, § 59, 16 Stat. 198, 207; accord Patent Act of 1836, § 14, 5 Stat. 117, 123, precisely as § 284 today permits recovery of those same "damages" as "compensation for the pecuniary loss ... the patentee has suffered from the infringement." Aro Mfg. Co. v. Convertible Top Replacement Co., 377 U.S. 476, 507 (1964) (plurality opinion) (brackets omitted) (quoting Coupe v. Royer, 155 U.S. 565, 582 (1895)).

When Congress has wanted to eliminate the apportionment requirement with regard to certain patent damages, Congress has done so explicitly. That is what Congress did in the design-patent context. In the 1880s, consistent with Garretson, this Court interpreted the patent damages statute, which authorized recovery for "actual damages sustained," as requiring "apportion[ment] ... between the patented feature and the unpatented features." Dobson v. Hartford Carpet Co., 114 U.S. 439, 443-45 (1885) (quotation marks omitted). Shortly thereafter, Congress decided it wanted a different rule for design patents and enacted a new damages provision, "specific to design patents," that "removed the apportionment requirement" and authorized unapportioned designpatent damages. See Nike, Inc. v. Wal-Mart Stores, Inc., 138 F.3d 1437, 1441 (Fed. Cir. 1998). Significantly, Congress has never enacted a corresponding amendment to displace the background principle of apportionment for utility-patent damages, which is at issue here.

The panel here wrongly believed that dispensing with apportionment was necessary to ensure that damages constitute "the difference between [the patentee's] pecuniary condition after the infringement. and what his condition would have been if the infringement had not occurred." Pet. App. 10a (quoting Aro Mfg., 377 U.S. at 507). That formulation comes from Yale Lock, a case that applied the apportionment rule in exactly the way that we urge. The Court in Yale Lock explained that in calculating that "difference [in] ... pecuniary condition," apportionment requires the factfinder to "ma[k]e proper allowances for all other causes" besides the defendant's infringement. 117 U.S. at 552-53. To hold otherwise, as the panel did, means overcompensating patentees by awarding them damages unrelated to the patent that was infringed. See Dowagiac Mfg., 235 U.S. at 646 ("In so far as the profits from the infringing sales were attributable to the patented improvements they belong[] to the plaintiff, and in so far as they were due to other parts or features they belong[] to the defendants."); *Westinghouse Elec. & Mfg. Co. v. Wagner Elec. & Mfg. Co.*, 225 U.S. 604, 614-15 (1912) (if a defendant's machine contains numerous components that "each may have jointly, but unequally, contributed to the profits," and "plaintiff's patent only created a part of the profits, he is only entitled to recover that part of the net gains").

2. The central error in the panel's opinion was the view that proof of but-for causation achieves apportionment.

The Federal Circuit's test for proving that the infringement caused the patentee to lose sales is borrowed from a Sixth Circuit patent case (decided before the Federal Circuit's creation) called *Panduit*, 575 F.2d at 1156. *Panduit* has four factors: (1) demand for the patented product as a whole; (2) absence of acceptable non-infringing alternatives; (3) patentee's capability to exploit the demand; and (4) amount of profit patentee would have made. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc) (adopting *Panduit*).

As Judge Dyk pointed out, however, *Panduit* has nothing to do with apportionment. There was no need to apportion the damages sought in that case, since "the patent in *Panduit* [wa]s directed to ... the entire product in [the] dispute." Pet. App. 71a-72a n.1. Rather, satisfying *Panduit*—which is to say, showing that consumers want the product containing the patented feature and that there are no acceptable noninfringing alternatives—simply "permits a court to reasonably infer that the lost profits claimed were in fact caused by the infringing sales, thus establishing a patentee's *prima facie* case with respect to 'but for' causation." *Rite-Hite Corp.*, 56 F.3d at 1545 (citation omitted). Proof that the patentee would have made the sale "but for" the infringement does not show how much of the product's value derives from the patented feature, nor how much derives from everything else.

That is why this "Court's patent cases make quite clear that more than but-for causation is required for apportionment." Pet. App. 73a (Dyk dissent). In each of this Court's lost-profits cases, the patentee would have profited had it not been for the defendant's infringement—in other words, but-for causation was present. If proof of but-for causation were all that is needed to satisfy apportionment, then those patentees should have been entitled to recover the entire value of the multi-feature products. But that is not what the Court held.

Yale Lock is a good illustration. There, the patentee lost profits because the act of infringement forced the patentee to lower prices for its own products. 117 U.S. at 552-53. The courts below had made an explicit finding of but-for causation: "[T]he reduction of prices ... was solely due to the defendant's infringement." *Id.* at 553. Even so, the patentee was awarded only "one-half of the amount of reduction in prices" because "proper deduction" had to be made for features in "defendant's lock" that were not covered by the patentee's patent. *Id.* at 552-53. But-for causation was not enough. Here, the panel concluded that no apportionment was necessary because "satisfaction of the *Panduit* factors satisfies principles of apportionment." Pet. App. 20a. The panel focused particularly on the first two factors: "demand for the patented product ... as a whole" and "the absence of non-infringing alternatives." Pet. App. 14a-16a, 19a-21a. Neither of those factors accomplishes the "separat[ion] or apportion[ment]" of lost profits "between the patented feature and the unpatented features." *Garretson*, 111 U.S. at 121.

As to the first factor, proving customer demand for the device as a whole—here, containing thousands of features—does nothing to identify the value of the patented feature relative to the rest. Pet. App. 74-75a, 77a (Dyk dissent). Moreover, the Federal Circuit has interpreted *Panduit* to allow recovery even if customers were willing to purchase a product that does not contain the patented feature at all. *Rite-Hite*, 56 F.3d at 1548. Thus, Mentor did not have to, and did not try to, prove that its emulator practices the '376 patent. C.A. A40,538.

Nor does the second factor, absence of acceptable non-infringing alternatives. An absence of non-infringing alternatives does not in any way measure "the value properly attribut[able] to the patented feature" for the entire product. Pet. App. 25a. Alternatives may be unavailable or unacceptable for reasons unrelated to the value of the patented feature—as this case itself illustrates. Mentor's patent involves improving debug visibility. Another company, Cadence, sold an emulator with debug visibility superior to Synopsys' emulator, which would have made it an acceptable non-infringing alternative. C.A. A42,187-88. Mentor satisfied factor two by presenting testimony that the parties' key customer (Intel) viewed Cadence's emulator as unacceptable and refused to purchase it for other reasons having nothing to do with debug visibility. C.A. A35,833.²

For all those reasons, Judge Dyk was correct to recognize that the *Panduit* test simply fails to do the work of apportionment: "Consumer demand for the patented feature and but-for causation may exist (and satisfy the *Panduit* factors), but this does not mean that other features do not contribute to consumer demand." Pet. App. 77a. The panel erroneously conflated "consumer demand and but-for causation with apportionment, contrary to the clear holding of the Supreme Court that the apportionment must be between patented and unpatented features." *Id*.

3. Were there any question about the breadth of the panel opinion, it is dispelled by Judge Stoll's opinion concurring in the denial of rehearing en banc—joined by the author of the panel opinion and half the active judges of the Federal Circuit. The concurrence justifies the panel's rule on the ground that satisfying the first two *Panduit* factors proves EMVR. As noted

² Still another reason *Panduit* does not constitute apportionment is that the Federal Circuit does not actually require proof of a lack of non-infringing alternatives to satisfy this factor. In a multi-supplier market, "a patent owner may satisfy the second *Panduit* element by substituting proof of its market share for proof of the absence of acceptable substitutes." *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1219 (Fed. Cir. 1993).

above, EMVR is the narrow exception to the apportionment requirement that permits a patentee to obtain all the profits on a multi-component product if the patentee shows that the patented feature alone is what drove consumer demand for the whole product. Supra 26-27 (quoting Garretson); accord Lucent Techs., Inc., v. Gateway, Inc., 580 F.3d 1301, 1336 (Fed. Cir. 2009) (EMVR requires patentee to "prove that the patent-related feature is the basis for customer demand" (emphasis added, quotation marks omitted)); accord LaserDynamics, 694 F.3d at 68 (patented feature must "alone drive[] the market" for the entire product). EMVR is so demanding that Mentor disavowed any attempt to prove it. Supra 10.

Yet, the concurrence concludes that those first two *Panduit* factors automatically prove that "the patented feature drives the demand for [the] entire multi-component product" and entitles the patentee to the "profits attributable to the entire product." Pet. App. 68a (quotation marks omitted). It declares that "because the *Panduit* factors are satisfied," "the apportionment required by *Garretson* is satisfied." Pet. App. 69a. Accordingly, "the result" of the Federal Circuit rule, as Judge Dyk explained, is that patentees who prove but-for causation will always get all of the profits on a multi-component product and "true apportionment will never be required." Pet. App. 77a-78a.

C. The decision below presents a recurring problem worthy of review.

The misguided rule in this case will have farreaching consequences. Although the panel went out of its way to assert that its holding is confined to "this case, on these facts," Pet. App. 10a-11a n.3, the assertion is flatly contradicted by its holding. The rule the Federal Circuit announced is far from case-specific: According to the panel, "satisfaction of the *Panduit* factors satisfies principles of apportionment." Pet. App. 20a. As the opinions respecting en banc review recognized, such a rule will come into play whenever lost profits are claimed on a product with multiple features.

Judge Dyk explained this starkly: "[A]pportionment is an important issue that will likely arise in every future lost profits case." Pet. App. 76a. This is especially significant because lost-profits cases, by definition, involve meaningful litigation between competitors in the same industry-not cottage-industry patent litigation brought by patent trolls. As a result, if the Federal Circuit's rule eliminating the apportionment requirement is allowed to persist, patentees will be able to threaten and extract windfall lost profits from their competitors even when much of the value of an accused multi-component product derives from things other than the patented feature. This Court recognized that danger when it labeled the failure to apportion lost profits "a very grave error." Seymour, 57 U.S. at 491. Without apportionment, the defendant could "be compelled to pay treble his whole profits to each of a dozen or more several inventors of some small improvement in the [product] he has built," converting "actual damages' to the plaintiff ... into an unlimited series of penalties on the defendant." Id. at 490-91. In addition, "each [patentee] who has patented an improvement in any portion of a ... complex machine may recover the whole profits."

such that "even the smallest part is made equal to the whole." *Id*.

The apportionment rule is more important now than ever, as we live in a world filled with multi-component products. See Bernard Chao, Lost Profits in a Multicomponent World, 59 B.C. L. Rev. (forthcoming 2017), https://tinyurl.com/y7ddxn69. To give just two examples, the emulators here have thousands of features, supra 6, and some estimate that 250,000 patents cover smartphones, see RPX Corp., Registration Statement (Form S-1), at 59 (Sept. 2, 2011), http://tinyurl.com/gnlzbr9. Accordingly, in litigation involving multi-component products, the asserted patent may relate to only one of a plethora of features that drive consumer sales.

That reality has colored this Court's recent interventions into the Federal Circuit's jurisprudence. See, e.g., eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 396-97 (2006) (Kennedy, J., concurring) (observing that a permanent injunction upon a finding of infringement may not be warranted "[w]hen the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations"); Samsung Elecs. Co. v. Apple *Inc.*, 137 S. Ct. 429, 435 (2016) (rejecting an over-compensatory Federal Circuit doctrine involving design patents where Apple had been awarded damages based on the entire value of Samsung's infringing smartphones even though Apple's patents pertained to the appearance of certain elements of the phone's screen or case); Life Techs. Corp. v. Promega Corp.,

137 S. Ct. 734, 743 (2017) (holding a "substantial portion" of a product under 35 U.S.C. § 271(f)(1) is "not ... a single component of a multicomponent invention").

Here, as in those recent cases, the Federal Circuit has adopted a rule that disregards the operative statute, this Court's precedents, and the logical relationship between the patented feature and the product as a whole. For the same reasons this Court granted review in those cases, it should do so here.

CONCLUSION

For the foregoing reasons, this Court should grant the petition for a writ of certiorari.

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