No. 06-937

IN THE

Supreme Court of the United States

QUANTA COMPUTER, INC., *et al.*,
Petitioners,

v.

LG ELECTRONICS, INC.,
Respondent.

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

BRIEF OF AMBERWAVE SYSTEMS CORPORATION AS *AMICUS CURIAE* IN SUPPORT OF RESPONDENT

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INTEREST OF THE *AMICUS CURIAE* [1]

Amicus curiae AmberWave Systems Corporation is submitting this brief to urge the Court to affirm the Federal Circuit's modern, pragmatic, and economically sensible interpretation of the patent exhaustion

[1] The parties have consented to the filing of this brief. No counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amicus curiae* or its counsel made a monetary contribution to the preparation or submission of this brief.

doctrine, and thereby preserve the technology market's ability to fully and fairly value technologies and patent rights when a patented article is manufactured, sold, or used by multiple companies in the stream of commerce.

AmberWave is a technology development company focused on building bridges between advanced materials science developed at leading universities and energy efficient-related industrial applications. The company and its research collaborators have developed advanced material technology which decreases power consumption in silicon computer chips, increases the efficiency of solar cells, and increases the performance of highly efficient solid state lighting.

AmberWave's technology is a result of more than $90 million in venture capital investment and 15 years of research at the Massachusetts Institute of Technology, AT&T Bell Labs, and its own advanced research facility in Salem, New Hampshire. The company also collaborates with top researchers at other higher education institutions such as the University of California, Purdue University, Rochester Institute of Technology, and the University of New Hampshire.

AmberWave invests millions of dollars annually in research and development. Because the semiconductor, solar energy, and solid state lighting technology markets are complex, diverse, specialized, and increasingly disaggregated, AmberWave licenses portions of its technology to manufacturers of technology components, and to firms that ultimately use and benefit from the technology. This affords AmberWave's partner companies the flexibility to integrate its advanced technologies into their products and improves the time-to-market for new energy-efficient products. Further, it provides AmberWave with the means to realize full value for its patented technologies, which it then invests in new technology developments for tomorrow's marketplace.

AmberWave has testified before the Small Business Committee of the U.S. House of Representatives on the importance of strong patents to small businesses. The company believes that to achieve the fundamental objectives of our nation's patent law, the technology marketplace must provide flexibility for buyers and sellers of patented technology to transact freely. Technology buyers must be in a position to negotiate with the actual providers of value. Patent holders must be fully and fairly compensated for the fruits of their innovative activity. A well functioning, complex technology market requires flexibility and freedom to contract, not artificial, paradigm-shifting market restraints such as those being proposed by petitioners here.

SUMMARY OF ARGUMENT

The fundamental issue in this case is whether patent holders suddenly should be disabled from obtaining the full economic value of their patent rights simply because a component, combination of components, or other patented article or system is made, sold, or used by a succession of commercial entities.

Under the guise of preserving the "traditional" patent exhaustion doctrine, a subject which this Court last addressed 65 years ago, petitioners are urging the Court to overturn more recent but still long-standing Federal Circuit precedent, beginning with *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700 (Fed. Cir. 1992) (holding that an otherwise lawful post-sales restriction on the use of a patented article is enforceable under the patent law). To serve their own pecuniary interests, petitioners contend that a U.S. patent holder's "reward," when its patented product (e.g., a computer component) is combined with other components and used in an end-product (e.g., a personal computer), must be limited to whatever royalty the patent holder receives from a *single licensee* at the beginning of the commercial chain (i.e., from the company that manufactures and sells, but does not use, the component). In most marketplace situations, this new rule would impose an artificial restraint on the freedom to negotiate patent licenses directly with disaggregated, downstream commercial entities. This not only would curtail the technology market in general, but also would deprive patent holders of their patent rights' full value, which usually is measured in terms of a "reasonable royalty."

Petitioners insist that their proposed rule should apply categorically, even where, as is the case here, patents not only cover the manufacture and sale of an article (e.g., microprocessor) by an initial licensee, but also its downstream use by additional commercial entities (e.g., its combination with other components in the production of personal computers that "original equipment manufacturers" such as petitioners assemble and sell to brand-name computer marketers).[2] Pointing to the district court's finding that the first-tier patent licenses involved in this case (i.e., the

[2] The patents in suit are limited to the "system" patents (i.e., the patents applicable to the combination of the patented components with other components). Neither Respondent LGE nor its licensee, Intel, manufactured or sold the patented systems.

licenses from Respondent LGE to Intel) are "unconditional," petitioners' confusing and inconsistent position appears to be that although a conditional *license* (such as a patent license that contains field of use restrictions) can in effect impose enforceable post-sales use restrictions on downstream purchasers of a patented article, conditional *sales* (such as sales expressly subject to the very same use restrictions) are barred.

Petitioners' self-serving interpretation of the patent exhaustion doctrine does not make economic sense. In the vast majority of situations, a real-world licensee that merely manufactures and sells—but does not use—a product *component* (e.g., a microprocessor) would not willingly pay a royalty reflecting the economic value that *downstream commercial entities* (i.e., their customers) derive from that component by incorporating it into and selling *end-products* such as personal computers. Nor is there any basis for petitioners' assumption that downstream entities readily would pay an inflated price for the component in order to subsidize the component supplier's payment of such a "full value" royalty. Indeed, in the unlikely event that a downstream entity chose to pay such a price, it would be depriving itself of the ability to make a purchasing decision based on the value that it receives from practicing the patents applicable to the component. Further, the downstream purchaser not only would lose the ability to negotiate directly with the patent holder, but also essentially would forgo the frequently exercised rights to challenge a patent's validity and a patent holder's assertions of patent infringement.

Thus, petitioners' economic theories are fallacious. By barring patent holders from negotiating patent royalties directly with downstream end-product manufacturers which, like petitioners, financially benefit from practicing the patents covering a system (here, patents covering the combination of the patented components with third-party computer components), petitioners' proposed rule would deprive patent holders of the ability to obtain the full value of their patent rights. That in turn would be deleterious to the entire technology market.

Petitioners offer little consolation by asserting that categorical abrogation of patent rights after the first sale in the stream of manufacture, sale, and use of a patented component would leave a patent holder free to sue downstream entities for breach of contract. They fail to explain why downstream component users and end-product sellers, in the absence of any liability for patent infringement, would voluntarily contract to pay royalties to a patent holder and thereby deprive themselves of the free ride that petitioners are so fervently advocating here. Further, ordinary state-law "expectation" damages for breach of contract would not be an adequate substitute for federal statutory patent infringement remedies.

The only sensible, modern-day interpretation of the patent exhaustion doctrine is the one applied by the Federal Circuit, which is well adapted to the present-day, complex, and increasingly specialized technology marketplace. *See, e.g., B. Braun Med., Inc. v. Abbott Lab.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997); *Mallinckrodt*, 976 F.2d at 708. Consistent with this Court's precedents, it ties exhaustion to the patent holder's receiving *full value* for its patent rights. And by allowing the patent holder to negotiate patent licenses directly with downstream commercial entities until full value is reached, it fairly apportions payment of that full value among the commercial entities that practice a patent. Furthermore, antitrust, patent misuse, and similar legal or equitable constraints would prevent the patent holder from demanding more than the full value of its patent rights.

Petitioners' proposed transformation of the exhaustion doctrine into a free pass for downstream patent infringement would trigger an abrupt sea change in the way that patent licensing has been conducted in the United States for many years. By making it difficult or impossible for a multitude of patent holders in a broad range of industries to be fully and fairly compensated when they license their patents, petitioners' interpretation would seriously disrupt the technology market, as well as diminish incentives and funds for engaging in innovative activity. That in turn would undermine the most basic objectives of the Patent Act. Moreover, if the Federal Circuit's long-standing patent exhaustion jurisprudence were overturned, countless existing patent licensing agreements negotiated on the basis of suddenly mistaken mutual assumptions regarding the payment of royalties from downstream entities either would have to be renegotiated by the parties or rescinded by the courts. To make matters worse, technology innovators very well might prefer, if not need, to sue multiple parties for patent infringement rather than receive less than full value for licensing their patents.

ARGUMENT

I. THE EXHAUSTION DOCTRINE SHOULD NOT APPLY UNLESS AND UNTIL A PATENT HOLDER RECEIVES THE FULL VALUE OF ITS PATENT RIGHTS

"[T]he federal patent system . . . seeks to foster and reward invention." *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 262 (1979). It "embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989); *see also Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480 (1974) ("The patent laws promote this progress by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research, and development."); *United States v. Univis Lens Co.*, 316 U.S. 241, 250 (1942) ("The declared purpose of the patent law is to promote the progress of science and the useful arts by granting to the inventor a limited monopoly, the exercise of which will enable him to secure the financial rewards for his invention.").

This Court long has recognized that the licensing of patent rights is consistent with the patent law's objectives. *See, e.g., Adams v. Burke*, 84 U.S. (17 Wall.) 453, 456 (1873) ("The right to manufacture, the right to sell, and the right to use are each substantive rights, and may be granted or conferred separately by the patentee."); *see generally eBay Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837, 1840 (2006) ("[S]ome patent holders . . . might reasonably prefer to license their patents, rather than undertake efforts to secure the financing necessary to bring their works to market themselves."). Accordingly, "[p]ermitting inventors to make enforceable agreements licensing the use of their inventions in return for royalties provides an additional incentive to invention." *Aronson*, 440 U.S. at 262.

Under this Court's classic patent exhaustion cases, the most recent of which, *Univis*, was decided 65 years ago, patent rights are exhausted only when a patent holder (or its licensee) has received its full reward for making an invention available to industry or the public. In *Adams v. Burke*, the Court explained that "the patentee or his assignee having in the act of sale received *all the royalty or consideration which he claims for the use of his invention* in that particular machine or instrument, it is open to the use of the purchaser without further restriction on account of the monopoly of the patentees." 84 U.S. (17 Wall.) at 456 (emphasis added). Similarly, in *Mitchell v. Hawley*, 83 U.S. (16 Wall.) 544, 547 (1872), the Court indicated that when a patentee "has himself constructed a machine and sold it *without any conditions*, or authorized another to construct [and] sell [or] use . . . it, *without any conditions*, and *the consideration has been paid to him for the thing patented* . . . the patentee must be understood to have parted to that extent with all his exclusive right" (emphasis added). And in *United States v. Masonite Corp.,* 316 U.S. 265 (1942), decided the same day as *Univis*, the Court, citing *Univis* and earlier cases, explained that in assessing the "strict limitations on the power of the patentee to attach conditions to the use of the patented article . . . [t]he test has been whether or not there has been such a disposition of the article that it *may fairly be said that the patentee* *has received his reward for the use of the article*." *Masonite*, 316 U.S. at 277-78 (emphasis added).

Thus, as the Court indicated in *Univis*, its "decisions have uniformly recognized that the purpose of the patent law is fulfilled with respect to any particular article *when the patentee has received his reward for the use of his invention* by the sale of the article, and that *once that purpose is realized* the patent law affords no basis for restraining the use and enjoyment of the thing sold." 316 U.S. at 251 (collecting cases) (emphasis added). In other words, this Court's cases all contemplate having a patent holder receive full value for its patent rights before patent exhaustion can occur.

Petitioners are urging the Court to turn this principle on its head. They argue that the first sale of a patented article automatically extinguishes all patent rights—and thereby bars conditional sales that impose otherwise lawful post-sale restrictions on the downstream commercial use of a patented article (e.g., a restriction against infringing a system patent by combining a patented microprocessor with third-party computer components)—*regardless* of whether the purpose of the patent law has been fulfilled by affording the patent holder the full value of its patent rights. In today's multi-tiered, disaggregated technology market, patented components are manufactured, purchased, and integrated by a succession of specialized commercial entities. Royalties paid to the patent holder by the company that manufactures a component and then sells it downstream to entities that incorporate the component into an end-product often do not represent the full value of the patent holder's rights.

The line of Federal Circuit cases which petitioners seek to overturn is fully consistent with the principle, implicit if not explicit in this Court's precedents, that exhaustion of patent rights occurs only when a patent holder obtains compensation, usually measured in terms of a "reasonable royalty," representing the full value of its patent rights.[3] In *Mallinckrodt v. Medipart* the Federal Circuit explained that a patent holder's "right to exclude may be waived in whole on in part." 976 F.2d at 703. Why would a rational patent holder, which has incurred enormous risks and costs in developing an invention, agree to part with its *entire* "right to exclude," 35 U.S.C. § 154(a), for something *less* than the patent rights' full value? Yet, that is precisely the economically distorted patent licensing scheme which petitioners are urging this Court to substitute for the clear, rational, and orderly free-market system that the Federal Circuit has allowed to flourish. It is an exquisitely *fair* system because in return for taking the risks and incurring the costs of innovative activity, and then making the fruits of those labors available to industry and the public, the patent holder has the right to be compensated for the full value of its patent rights—no more, and no less.

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[3] A "reasonable royalty" is the familiar standard that has been used for decades in patent infringement suits, *see* 35 U.S.C. § 284 (providing that in the event of patent infringement, a patent holder is entitled to no "less than that a reasonable royalty for the use made of the invention by the infringer"), and also in patent licensing negotiations. The leading case of *Georgia Pacific Corp. v. United State Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), lists some of the many factors that courts in patent infringement suits take into account to determine what reasonable royalty would have been agreed upon in a hypothetical negotiation between a willing patent holder and a willing licensee.

In *Mallinckrodt* the court of appeals, after carefully analyzing Supreme Court exhaustion precedents, held that restrictions placed on the post-sale use of patented articles are enforceable under the patent law "[u]nless the condition violates some other law or policy (in the patent field, notably the misuse or antitrust law . . .)." 976 F.2d at 708; *see* Dinu Gruia, Comment, *Restrictions on Use of Purchased Patented Goods Subject to the Rule of Reason—Mallinckrodt, Inc. v. Medipart, Inc.*, 27 SUFFOLK U. L. REV. 292, 298 (1993) ("The Federal Circuit's refusal in *Mallinckrodt* to construe the exhaustion doctrine as applying indiscriminately to all restrictions on patented goods is consistent with precedent."). Building upon *Malllinckrodt*, the Federal Circuit in *B. Braun Medical v. Abbott Laboratories* held as follows:

> As a general matter, we explained [in *Mallinckrodt*] that an *unconditional* sale of a patented device exhausts the patentee's right to control the purchaser's use of the device thereafter. The theory behind this rule is that *in such a transaction, the patentee has bargained for, and received, an amount equal to the full value of the goods*. This exhaustion doctrine, however, does not apply to an *expressly conditional* sale or license. In such a transaction, it is more reasonable to infer that the parties negotiated a price that reflects *only the value of the "use" rights conferred by the patentee*.

124 F.3d at 1426 (internal citations omitted) (emphasis added). The Federal Circuit has consistently applied these principles. *See, e.g., Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1336 (Fed. Cir. 2006), *cert. denied,* 127 S. Ct. 2062 (2007) ("The first sale/patent exhaustion doctrine establishes that the *unrestricted* first sale by a patentee of his patented article ex-

hausts his patent rights in the article.") (emphasis added); *see also Jazz Photo Corp. v. Int'l Trade Comm'n*, 264 F.3d 1094, 1105 (Fed. Cir. 2001) ("The *unrestricted* sale of a patented article, by or with the authority of the patentee, 'exhausts' the patentee's right to control further sale and use of that article by enforcing the patent under which it was first sold.") (emphasis added).

Contrary to the Solicitor General's assertion, the Federal Circuit, in holding that a patent holder can preserve its patent rights by imposing otherwise lawful post-sales conditions on use of a patented product, has neither "diluted" the exhaustion doctrine nor "downgraded" it into some sort of "default presumption." U.S. Br. at 7, 8. Instead, by holding that a patent holder can expressly condition a sale (as well as a license) in order to obtain royalties from downstream commercial users of a patented article or system (e.g., from computer manufacturers that combine patented microprocessors with third-party computer components), the Federal Circuit has brought this Court's "traditional" exhaustion doctrine into the modern age.[4]

To be sure, in some circumstances, such as where a patent holder manufactures and sells a consumer end-product, or licenses a single company to do so in return for payment of a reasonable royalty, the sale of the product would be unconditional and the patent holder's rights are exhausted. This is because the

[4] Petitioners' contention that "Congress has never seen a need to modify this Court's exhaustion precedents," Pet. Br. at 45, proves nothing. It is equally true that if Congress disagreed with the Federal Circuit's interpretation and application of the exhaustion doctrine, it could have modified that court's exhaustion precedents at some point during the past 15 years.

patent holder has received compensation (either sales revenues or a royalty) reflecting the full value of its patent rights. *See B. Braun*, 124 F.3d at 1426 ("[I]n such a transaction, the patentee has bargained for, and received, an amount equal to the full value of the goods.").

But in the real world, the royalties paid in connection with a "first sale" (e.g., sale of a patented component by a single licensee in the commercial chain) often do not reflect the full value of patent rights (i.e., are not equivalent to a reasonable royalty), and as a result, should not trigger patent exhaustion. Where, as here, there are multiple, disaggregated entities that practice interrelated but independent patents in the stream of commerce—such as where one company (e.g., Intel) manufactures and sells a component (e.g., microprocessors and chipsets) to other companies (e.g., petitioners) that combine it with additional components into end-products (e.g., personal computers) that are marketed to the public by a third tier of companies (e.g., Dell; Hewlett-Packard; Gateway)—payment of a royalty by the first licensee (i.e., Intel, the company that merely manufactures and sells, *but does not use*, the component) almost certainly would not represent the full value of the patent holder's rights. This is particularly true where, as here, separate and independent patents cover the component *and* its combination with other components in an end-product. Since the first licensee does not practice or benefit financially from that combination, why should it agree or be expected to pay a royalty based on financial benefits that only its customers receive?

For this reason, the Federal Circuit has correctly recognized that a patent holder must be able to negotiate patent licenses and royalties with the downstream commercial entities that practice its patents (here, the LGE system patents that apply to the combination of Intel's microprocessors and chipsets with third-party components in personal computer systems) until full value is reached. Under the Federal Circuit's jurisprudence, ranging from *Mallinckrodt* to the opinion below, patent holders can preserve their patent rights for this purpose by ensuring that each such downstream company is *expressly notified* that its purchase or use of the patented article is conditioned upon the payment of a royalty. *See B. Braun*, 124 F.3d at 1426 (the "exhaustion doctrine . . . does not apply to an expressly conditional sale"); *Mallinckrodt*, 976 F.2d at 702-03 (sale of medical device expressly conditioned upon "Single Use Only" label notice). The negotiated royalty paid by a downstream user pursuant to such an expressly conditional sale does not normally represent the full value of the patent holder's rights, but is intended to be a fair reflection of the particular value that the user enjoys by practicing the patents.

Continuing to afford patent holders the freedom to negotiate patent licenses and royalties with downstream companies that practice patents for their own financial benefit does not mean that patent holders can "demand and obtain royalties beyond those that the [patent] statute was intended to provide." U.S. Br. at 7. The Federal Circuit has emphasized in this regard that express post-sale restrictions on use of a patented product

> are contractual in nature and are subject to antitrust, patent, contract, and any other applicable law, as well as equitable considerations

> such as patent misuse. Accordingly, *conditions that violate some law or equitable consideration are unenforceable*. On the other hand, violation of valid conditions entitles the patentee to a remedy for either patent infringement or breach of contract.

B. Braun, 124 F.3d at 1426 (internal citations omitted) (emphasis added); *see also Mallinckrodt*, 976 F.2d at 708 (holding that in the absence of antitrust violations or patent misuse, "private parties retain the freedom to contract concerning conditions of sale").

The opinion below relies upon these well established principles. *See LG Elec., Inc. v. Bizcom Elec., Inc.*, 453 F.3d 1364, 1369-70 (Fed. Cir. 2006).[5] Although petitioners refer to the "Federal Circuit's confusion" on the subject of patent exhaustion, Pet. Br. at 40, that court's carefully considered and consistently applied interpretation of the exhaustion doctrine should not be so easily dismissed. The Court of Appeals for the Federal Circuit was established in part to "provide[] a forum that will increase doctrinal stability in the field of patent law." S. Rep. No. 97-275, at 5 (1982), *as reprinted in* 1982 U.S.C.A.A.N. 11, 15. That is exactly what the Federal Circuit has accomplished as to the patent exhaustion doctrine. *See* Gruia, Comment, *supra* at 299 ("The *Mallinckrodt* court provides lower courts with a clear and consis-

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[5] By allowing a patent holder to negotiate freely and fairly with each company that practices its patents, those principles embody the type of "flexible approach" that this Court recently indicated should be followed when interpreting and applying basic patent law principles. *See KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007) ("rejecting the rigid approach of the Court of Appeals" on the question of obviousness).

tent standard by which to evaluate the enforceability of restrictions on patented goods."). Indeed, "[b]ecause of the unique character of the Federal Circuit, its conclusions are entitled to special deference by this Court." *United States v. Fausto*, 484 U.S. 439, 464 n.11 (1988) (Stevens, J. dissenting).

Furthermore, there is nothing "vexatious," Pet. Br. at 54, about a patent holder seeking to obtain the full value of its patent rights from companies, such as petitioners, that financially benefit from practicing the patents. As discussed above, seeking the full value of patent rights not only is perfectly consistent with the exhaustion doctrine, but also with the underlying objectives of the patent law itself. It is *petitioners'* position that would subvert the patent law's purposes by diminishing incentives and curtailing an important source of funding for innovative activity. "When a court restricts the patent holder's ability to collect royalties, it reduces the rewards anticipated from patents and thus the incentive for other people to invent." Frank H. Easterbrook, *"Forward: The Court and The Economic System,"* 98 HARV. L. REV. 4, 11 (1984-85). "There is an ethical underpinning required for any society that wants its entrepreneurs to do what they do best. They must be recognized and rewarded." Joseph Allen, *Swords into Plowshares: How Tech Transfer (Unless We Mess It Up) Can Help Change the World*, 41 LES NOUVELLES 219, 223 (Dec. 2006).[6]

[6] Insofar as Intel sold the patented components *outside* of the United States, the exhaustion doctrine would not be triggered, since the "authorized sale" (whether made under a "conditional license" or by a "conditional sale") did not occur "within the United States." 35 U.S.C. § 271(a). In *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746, 1752 (2007), the Court reaffirmed that there is a presumption against the extraterritorial application of

II. PETITIONERS' INTERPRETATION OF THE EXHAUSTION DOCTRINE WOULD PREVENT PATENT HOLDERS FROM RECEIVING THE FULL VALUE OF THEIR PATENT RIGHTS AND SEVERELY DISRUPT THE PATENT LICENSING MARKETPLACE

Petitioners contend that their proposed prohibition against conditional sales—which they misleadingly describe as the "traditional" exhaustion doctrine—"makes economic and policy sense." Pet. Br. at 15. Exactly the opposite is true. In the unnatural and constricted patent licensing marketplace that petitioners are asking this Court to create, patent holders rarely would be able to obtain the full value of their patent rights. Instead, downstream commercial entities that economically benefit from purchasing and using patented articles, including by incorporating patented components into a patented system for production of a consumer end-product, would be absolved of any patent infringement liability. They would enjoy a free ride while incentives for engaging in innovative activity and patent licensing would be undermined significantly.

U.S. patent law. *See* 127 S. Ct. at 1752 ("Our patent system makes no claim to extraterritorial effect; these acts of Congress do not, and were not intended to, operate beyond the limits of the United States . . . .") (internal quotation marks omitted). Thus, in order for patent exhaustion to apply, the "authorized first sale must have occurred under the United States patent," which requires that the first sale occur "in the United States." *Jazz Photo Corp. v. Int'l Trade Comm'n*, 264 F.3d at 1105 (citing *Boesch v. Graff*, 133 U.S. 697, 701-703 (1890), for the proposition that a lawful foreign purchase does not obviate the need for a license from the U.S. patentee before importation into and sale in the United States).

Therefore, petitioners' interpretation of the exhaustion doctrine represents bad economic policy. Today's modern economy is complex, specialized, and increasingly disaggregated. *See* Michael Porter, *Clusters And Competition*, *in* ON COMPETITION 197, 209 (1998) (discussing why today's "more dynamic environment can render vertical integration inefficient, ineffective, and inflexible"). Our nation's economy, and innovative firms such as *amicus curiae* AmberWave Systems, benefit from intellectual property policies that provide incentives for coordination and negotiation among commercial entities. *See generally* F. Scott Kieff, *Coordination, Property, Intellectual Property: An Unconventional Approach To Anticompetitive Effects and Downstream Access*, 56 EMORY L.J. 327, 345 (2006) (explaining that "the availability of coordination helps [disaggregated commercial entities] to be more specialized in the skills and resources they each can bring to a collective enterprise than they would have been without the ability to coordinate"). By affording a technology innovator the flexibility to negotiate patent licenses directly with downstream commercial entities until full value is reached, the Federal Circuit's exhaustion jurisprudence encourages coordination between the patent holder and the ultimate beneficiary of the patented technology. This not only reflects current marketplace realities, but also sound public policy.

1. *Petitioners' interpretation of the exhaustion doctrine is economically unrealistic and unworkable.* According to petitioners, their proposed rule "minimizes transaction costs by forcing the patent owner to exact the full value of its patent rights in one negotiation with the first purchaser, which can then share the burden with the rest of the distribution chain by charging a higher price." *Ibid.* To the

contrary, petitioners' notion that a patent holder likely could obtain "full value" from a single licensee at the top of the distribution chain, especially where, as here, that licensee merely produces and sells, and does not use, a patented component that is used only by downstream entities to manufacture and sell end-products, has no basis in reality.

A simple hypothetical illustrates this point. Suppose a patent holder (P) possesses patents covering *both* a computer microprocessor and its combination with other components in personal computer systems.[7] P licenses its patents to a microchip manufacturer (C) for a royalty in the amount of $1 for each microprocessor produced and sold. C, which does not manufacture personal computer systems, then supplies the microprocessors to a computer manufacturer (M) for a net sales price of $5 per unit. M combines the patented microprocessor with other components in order to assemble personal computers, which it supplies to brand-name computer companies at a net sales price of $500 per unit.

Under petitioners' supposedly "traditional" view of the exhaustion doctrine, P would be strictly limited to the $1 royalty that it receives from C. According to petitioners, the exhaustion doctrine bars P from asserting any patent rights against, or collecting any royalty from, M, even though M derives substantial economic value from practicing the system patents. Petitioners speculate that C could just agree up front to pay a royalty representing the full *downstream value* of P's patent rights. For example, if that full value, measured as a reasonable royalty, were $20

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[7] The patents covering the personal computer system may or may not include method patents as well as device patents.

per personal computer system sold by M, petitioners assert that C for some reason would voluntarily agree to pay such a substantially higher amount as a royalty to P. But why would C rationally agree to pay a $20 royalty if it is merely supplying microprocessors to M, and for a price of only $5? Petitioners assert that C could just inflate the price, for example, to $19 per microprocessor. But why would M, which petitioners argue is *not liable for patent infringement*, agree to pay $19 to C for a microprocessor that it otherwise can purchase for just $5 (or perhaps even for less from another source)? Furthermore, M very well may prefer to challenge the validity and/or infringement of the patents rather than pay such a high price to subsidize the "full value" royalty that petitioners erroneously assume C would be willing to pay to P.

Petitioners, therefore, simply are wrong when they assert that "[a] rational patentee cannot obtain more by negotiating separately . . . than he could have obtained by charging the entire amount to the first party in the chain and relying on it to pass the cost along in the form of higher prices." Pet. Br. at 49. In reality, there are many types of situations in which petitioners' facile interpretation of the exhaustion doctrine would artificially limit rational market negotiations and deprive patent holders of the full value of their patent rights.

2. *Petitioners' interpretation also is unfair to downstream commercial entities that purchase and use patented components in producing an end-product.* If petitioners' theories were correct, then downstream purchasers and users (such as petitioners themselves) would be at the mercy of component suppliers which, according to petitioners, would inflate their

prices in order to subsidize the higher royalties that they supposedly would agree to pay to patent holders.

Under petitioners' top-heavy patent licensing scheme, a patent holder, despite the inherent risks of having a sole supplier, would have to choose a single licensee, which petitioners argue must be the sole source of royalties for downstream entities' use of a patented component in producing an end-product. This single licensee would have to be the company that the patent holder believes has the most economic clout to *force* downstream entities to pay an inflated component price in order to subsidize the licensee's royalty payments, even if those downstream purchasers and users question whether the patents at issue are valid or would be infringed.

Rather than maintaining the current marketplace practice of allowing each downstream entity that uses a patented component to determine for itself—based on its own, often proprietary knowledge and business information—what value that use has, and to negotiate, directly with the patent holder, a fair royalty based on that particular use and value, petitioners would compel the first (and only) licensee, which in many cases does not even use the component, to make downstream "value" predictions for every one of its potential customers. For example, suppose a microchip manufacturer (C) wishes to produce and sell a new type of microprocessor. C hopes that it may be able to sell the microprocessor to at least three types of customers: (i) M-1, companies which manufacture high priced, high-end personal computers that are continuously replaced by newer models; (ii) M-2, companies which manufacture lower priced commercial computers that are sold in bulk quantities for office use and are less frequently replaced by new models; and (iii) M-3, companies which refurbish used computers, including by upgrading them with new microprocessors.

Under petitioners' proposed interpretation of the exhaustion doctrine, C, the microchip manufacturer, would have to *predict* which specific computer manufacturers would purchase the new microprocessor; exactly how and for what length of time those companies would use the microprocessors in particular computer models that they manufacture; and what the net sales prices of those companies' computers (containing the new microprocessor) would be. According to petitioners, C then supposedly would agree to pay a "full value" royalty based on this sort of unilateral guesswork, in which M-1, M-2, and M-3 would have no direct input. Indeed, there would be no prior notice at all to downstream entities such as M-1, M-2, and M-3, which according to petitioners, simply should be saddled with "a higher price" for the patented components that they purchase and use. Pet. Br. at 15. *That* scenario would be a recipe for "inconvenience, annoyance, and inefficiency." U.S. Br. at 27.

In contrast, under the Federal Circuit's enlightened and long-standing interpretation of the exhaustion doctrine, there is no risk of surprise, no unfairness to downstream companies. A sale of a patented article to a downstream entity can be conditional (i.e., subject to a reservation of patent rights) only if there has been an express notice to the purchaser. *See B. Braun*, 124 F.3d at 1426 ("This exhaustion doctrine . . . does not apply to an *expressly* conditional sale . . . .") (emphasis added); *see also LG Elec. v. Bizcom*, 453 F.3d at 1370 ("[The] conditional agreement required Intel to notify its customers of the limited scope of the license, which it did."). Thus, under the Federal Circuit's exhaustion jurisprudence, downstream entities know in advance which component suppliers assert patent rights and can make their purchasing decisions based on that information.

3. *Downstream commercial entities cannot reasonably be expected to enter into contracts for the payment of royalties in the absence of any threat of patent infringement.* Petitioners argue that "[a]fter an authorized sale the patentee may enforce *contractual* promises it has obtained from the purchaser by suing for breach." Pet. Br. at 1-2; *see also* U.S. Br. at 7 (arguing that "[t]he doctrine bars the use of patent law (but not contract law) to enforce restrictions on a purchaser's use or resale of a patented article"). According to petitioners, a patent holder "[l]ike any ordinary seller of goods . . . may insist that purchasers sign contracts agreeing that they will make future payments to [the patent holder], or use or resell the purchased goods only in certain ways." Pet. Br. at 14.

The suggestion that downstream entities, which petitioners contend are immune from patent infringement, somehow would voluntarily agree to bind themselves contractually to "make future payments" to the patent holder, borders on disingenuous. If such contracts were a genuine possibility, then petitioners long ago would have entered into contracts with LGE.

Furthermore, even if the hypothetical contracts that petitioners postulate were real, the remedies available for their breach simply would not be an adequate substitute for a patent infringement suit. Assuming that a downstream entity signed some sort of contract (other than a patent license) with a patent holder and then breached that contract, the patent holder presumably would be able to file a state court suit against the contracting party for expectation damages. *Cf.* U.C.C. § 2-703 (2004) (Seller's Remedies In General). If there were more than one downstream company in privity of contract, the patent holder very well may have to file multiple suits in several states. Moreover, if these hypothetical contracts were with foreign entities, patent holders may have to pursue breach of contract remedies (which vary from country to country) in foreign tribunals around the world.

In comparison, a patent infringement suit would afford the patent holder a single federal forum. *See* 28 U.S.C. § 1338(a). It could proceed in federal district court against all infringers (e.g., the manufacturer licensee subject to a use restriction and any of its customers that violate the restriction). *See* 35 U.S.C. § 271(a) (i.e., "whoever without authority . . . uses . . . or sells any patented invention . . . infringes the patent."). And if the patent holder won, it would be awarded "damages adequate to compensate for the infringement but in no event less that a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court." *Id.* § 284. In addition, in some circumstances, such as where there is willful infringement, a district court, in its discretion, "may increase the damages up to three times the amount found or assessed." *Ibid*; *see generally Read Corp. v. Portec, Inc.* 970 F.2d 816, 826 (Fed. Cir. 1992), *abrogated on other grounds by Markman v. Westview Instruments, Inc.,* 52 F.3d 967 (Fed. Cir. 1995) (en banc)) ("The paramount determination in deciding to grant enhancement and the amount thereof is the egregiousness of the defendant's conduct based on all the facts and circumstances."). Furthermore, regardless of whether injunctive relief were available under state law for breach of contract, the federal Patent Act expressly authorizes district courts in patent infringement suits to issue injunctions "in accordance with the principles of equity." 35 U.S.C. § 283; *see eBay*, 126 S. Ct. at 1841.

4. *Petitioners' confusing and contradictory interpretation of the exhaustion doctrine would create marketplace uncertainty.* The patent exhaustion principles that petitioners are challenging have been in place, and have served as the basis for myriad patent licensing agreements, since at least 1992. Regressing to what petitioners claim are pre-*Mallinckrodt* "traditional" exhaustion principles—principles which petitioners in their certiorari petition argued "are notoriously confusing," Pet. Br. at 7—would create considerable uncertainty, if not chaos, in the technology marketplace.

One major source of confusion would be the murky distinction that petitioners have attempted to draw between "conditional licenses" and "conditional sales." This seems to be a distinction without a difference since petitioners appear to acknowledge that conditional licenses in effect permit the same types of downstream restrictions on purchasers of patented articles (e.g., a prohibition against combining a patented component with third-party component) that petitioners seek to prohibit by means of conditional sales.[8]

[8] *See* Pet. Br. at 28-29 ("Although restrictions imposed on *purchasers* are not enforceable through infringement suits, this Court has permitted conditions imposed on manufacturing *licensees* . . . this Court held that if a purchaser knowingly buys

The absence of a clear and principled, functional distinction between conditional licenses and conditional sales reflects the perplexing state of this Court's exhaustion jurisprudence *prior* to the advent of the Federal Circuit. In *B. Braun* the court of appeals brought clarity to the exhaustion doctrine, in part by recognizing that there is no logical reason to prohibit through conditional sales the same downstream patent use restrictions that can be accomplished through conditional licenses. Thus, the court held that the "exhaustion doctrine . . . does not apply to an expressly conditional *sale or license*." 124 F.3d at 1426 (emphasis added).

Nevertheless, petitioners illogically contend that (i) a downstream user of a patented article is free from claims for patent infringement even though the manufacturer, under an unrestricted license, sold the article with express notice to the purchaser that the sale was conditional, but that (ii) the same purchaser would be subject to infringement claims if the manufacturer's license was conditional, even though no notice of the license's restrictions was provided to the purchaser. *See* Pet. Br. at 29 (asserting that in *General Talking Pictures* the Court explained "that

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from a manufacturing licensee in violation of a restriction in the license, both the licensee and the purchaser may be sued for infringement.") (citing *General Talking Pictures Corp. v. Western Elec. Co.*, 304 U.S. 175 (1938)). The Government's brief attempts to draw the same distinction. *See* U.S. Br. at 15 ("In contrast to the Court's consistent rejection of attempts by patentees to place patent-law limitations on use or resale by purchasers following authorized sales, this Court has repeatedly held that a patentee may require licensees to comply with any lawful restriction to which the parties may agree . . . on pain of liability for patent infringement for both the licensee and purchasers with knowledge of the restriction.").

the cases invalidating restrictions on purchasers did not apply to restrictions in manufacturing licenses"). There is no rational basis for such a distinction.

Furthermore, from the viewpoint of downstream entities (such as petitioners), receiving an express notice that its purchase and use of a patented article is conditional in that it is subject to an assertion of patent rights eliminates any post-sale surprise. In contrast, a conditional license, which may not require any notice to downstream purchasers, creates much more marketplace uncertainty.

Compelling patent holders to protect their downstream patent rights by insisting upon conditional licenses would be detrimental to fostering and maintaining commercial relationships with manufacturers. They may decline to accept a restrictive license from a particular patent holder, or in return for receiving a license that limits the scope of commercial activity, may demand a lower royalty rate. In addition, under petitioners' interpretation of the exhaustion doctrine, a patent holder would not be able to manufacture a product itself, and then sell it into a particular field of use without forfeiting patent rights, unless it could find (or create) some entity to accept a conditional license and market the product for the patent holder. That would *increase*, not decrease, transaction costs.

5. *Adoption of petitioners' interpretation would spawn litigation over a multitude of existing patent licenses*, *and discourage patent licensing in the future.* For at least the past 15 years, a vast number of licensing agreements have been negotiated against the backdrop of *Mallinkrodt* and its progeny. *See, e.g.*, Brian G. Brunsvold, Dennis P. O'Reilley, *Drafting Patent License Agreements,* § 24.05 (4th ed.

1998) (explaining that the Federal Circuit in *Mallinkrodt* "after careful review of Supreme Court precedent, held that . . . a sale be unconditional to provide a basis for complete exhaustion of the patent rights" and providing "examples of successful court-tested procedures for notices to purchasers").

If the Court were to trigger the seismic marketplace changes that petitioners request, a multitude of existing licensing agreements may abruptly be called into question. For example, suppose the patent holder for a component has negotiated a licensing agreement with a component manufacturer, and the agreed-upon royalty was based on the parties' understanding and assumption that the patent holder could and would negotiate and receive additional royalties from downstream entities that purchase and use the component in producing consumer end-products. Were downstream royalties suddenly nullified or otherwise made unavailable, the patent holder would have an immediate reason to renegotiate the license and royalty with that manufacturer.

In the event the manufacturer refused to renegotiate, then the patent holder may be forced to file a state court suit seeking rescission of the license agreement. *See generally Dow Chem. Co. v. United States*, 226 F.3d 1334, 1345 (Fed. Cir. 2000) (explaining in dispute over patent license that "[r]ecission has the effect of voiding a contract from its inception, *i.e.,* as if it never existed. It is an equitable doctrine which is grounded on mutual mistake . . . in the formation of a contract.") (internal citation omitted); RESTATEMENT (SECOND) OF CONTRACTS § 152 (1981) ("Where a mistake of both parties at the time a contract was made as to a basic assumption on which the contract was made has a material effect on the agreed exchange of performances, the contract is voidable by the adversely affected party unless he bears the risk of the mistake . . . ."); 27 Samuel Williston, A TREATISE ON THE LAW OF CONTRACTS (4th ed. 2003) § 70:125 ("Whenever it is clearly shown that parties in their contractual dealings have acted under a common mistake of law, then the injured party will be relieved if that can be done without doing an injustice to others and if equity will afford redress.").

Along the same lines, if petitioners were to prevail, hordes of downstream entities that previously had entered into license and royalty agreements with patent holders may contend that they no longer need to comply. In such a case, a patent holder disputing that a particular downstream license agreement is void would be forced to sue for breach of contract. Thus, if the Court were to adopt petitioners' interpretation of the exhaustion doctrine, courts would be deluged with litigation over the validity of patent licenses.

Further, as emphasized above, petitioners' proposed expansion of the patent exhaustion doctrine would eliminate the opportunity for many patent holders and downstream companies that practice patents to enter into patent licensing agreements. While that alone would cause a major disruption in the marketplace, petitioners' new rule could do even more harm because it would reduce patent holders' incentives to license their inventions at all. By limiting patent holders to whatever royalties they can obtain from a single, first-tier licensee, and thereby deprive them of the full value of their patents, patent holders may find it more profitable to refrain from issuing licenses, and instead, sue one or more companies for a reasonable royalty, or even increased damages as provided by 35 U.S.C. § 284. Discouraging the practice of patent licensing would be inconsistent with the basic purposes of the patent law, *see Aronson*, 440 U.S. at 262, create economic inefficiencies, *see eBay*, 126 S. Ct. at 1840, and subject companies to "the necessity of defending an expensive infringement action during the period when [they] may be least able to afford one," *Lear, Inc. v. Adkins*, 395 U.S. 653, 669 (1969).

CONCLUSION

The judgment of the court of appeals should be affirmed.

Respectfully submitted,

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