In *Quanta Computer, Inc. v. LG Electronics, Inc.*, the Supreme Court recalibrated the balance between the rights of a patentee to contractually control the post-sale transfer and the use of patented goods. Specifically, the Court extended the doctrine of patent exhaustion to cover the exhaustion of patents *not recited in the license*, as well as the practice of technology that does not infringe any patent, but which can only be used in a manner by customers that would infringe a patent. While *Quanta* arose out of facts concerning computer technology, the implications of this decision will be widespread, permeating diverse fields like biotechnology, including the future of the patent-protected seed industry. Above all, *Quanta*, the latest of several Supreme Court responses to Federal Circuit judicial activism, should serve as warning to the patent community that it is far better to have the Federal Circuit shape the patent law than to have occasional guidance from the Court.
In *Quanta Computer, Inc. v. LG Electronics, Inc.*, the Supreme Court has recalibrated the balance between the rights of a patentee to contractually control the post-sale transfer and the use of patented goods versus a customer’s (or downstream purchaser’s) freedom from patent restraints under the doctrine of patent “exhaustion.” Nineteenth century Supreme Court precedent had established such freedom, while beginning in 1984, the United States Court of Appeals for the Federal Circuit (“Federal Circuit”) had both limited the scope of exhaustion and permitted contractual provisions to trump other aspects of exhaustion. The Court *sub silentio* overruled Federal Circuit limitations to exhaustion while demonstrating admirable judicial restraint by deferring to another day the continued viability of contractual proscriptions on a customer’s use of the goods. Given uniformly anti-patentee holdings of the Supreme Court since 2002, the result in *Quanta* was hardly
unpredictable. Quanta represents one of the more important patent precedents of the modern Supreme Court era of interest in this subject. Far from being limited to the narrow confines of the computer technology relevant to the facts of the case, Quanta has widespread implications covering diverse fields such as biotechnology, including the future of the patent-protected seed industry.

This paper commences with an understanding of the classic principles of patent exhaustion based upon a study of Supreme Court precedent. While patent exhaustion today is involved in high technology controversies, the roots of the doctrine are traced to nineteenth century cases, particularly one dealing with coffin lids. The modern Supreme Court statement of the law of patent exhaustion prior to Quanta was given more than sixty-five years ago.

More than twenty years ago, in the second full year of existence of the Federal Circuit, the doctrine of patent exhaustion started to be whittled away. Merely by transforming a claim from a product into a method of using that product, presto, patent exhaustion was found not to exist. Soon, contractual proscriptions were permitted to trump patent exhaustion.

The pendulum continued to swing toward ever greater rights for a patentee; the culmination was the decision of the Federal Circuit below that led up to the Quanta case; that decision represented the extreme swing of the pendulum, a case so extreme that certiorari was granted and the tide finally changed.

The patentee, LG Electronics, Inc., ("LGE") in Quanta crafted an ingenious licensing strategy that permitted a license on some technology to chip maker Intel, but licenses to the combination of such chips with other components of computers were withheld - permitting further royalties from computer manufacturers for the inclusion of the chips on which Intel Corporation ("Intel") had already paid its licensing fees. With a slow and steady erosion of patent exhaustion for the more than twenty years since the 1984 first Federal Circuit decision limiting exhaustion, the Supreme Court decision abruptly started the pendulum swinging back toward a
strong doctrine of patent exhaustion. While the Court did answer many questions concerning patent exhaustion, it left the door wide open for further debates – and litigation – on several key areas. First and foremost, the Court showed judicial restraint and refrained from entering the debates over whether *contractual* proscriptions may be enforced to preclude downstream restrictions after a first sale. Crucial questions remain open in certain areas.

One of the more important questions that remains open is whether patent exhaustion impacts the right of a farmer to use patented seed that he has purchased and planted for the purpose of creating new seeds to be sold on the open market or used for his own planting: Is the patent right “exhausted” altogether by the first sale of the patented seed, or does the patentee retain patent rights to a second generation growth from harvested seed? A parallel question is raised where a living culture of a microorganism is sold: What patent rights are retained for second (and third) generation products that are produced *in vivo* by culturing the initial, living sample? Another topic sure to be debated, and perhaps litigated, is whether the sale of a patented product in a foreign country “exhausts” the United States patent right: May an offshore purchaser from the patentee under a parallel foreign patent import patented goods free from infringement under patent exhaustion?

It is certain that attempts will be made to further clarify *Quanta*, either judicially over the course of the next few years or legislatively perhaps as early as the 111th Congress that commences in 2009.

I. Supreme Court Evolution of Patent Exhaustion

A. The Adams v. Burke Patented Coffin Lids

As a matter of patent law, the purchaser of patented goods receives such goods with the right to use or resell them free from constraints from the patentee. This is the principle of patent “exhaustion” that is perhaps most easily understood in the context of nineteenth century mortuary science in the *Adams v. Burke* coffin lid case.

The original patentee in the *Adams* coffin lid case divided his patent rights territorially: Rights to Boston (plus a ten mile radius outside Boston) were sold to Lockhart & Seelye. Subsequently, the remainder of the United States patent rights

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18 See infra Part III.B.
19 See infra Part IV.
20 See infra Part IV.A.
21 See infra Part IV.
22 Baluch, supra note 9, at 1.
23 See infra Part V.B.1.
24 See infra Part V.B.2.
25 See infra Part VI.
26 Adams v. Burke, 84 U.S. 453, 456–457 (1873); see also Bloomer v. McQuewan, 55 U.S. 539, 549 (1853) (“[W]hen the [patented] machine passes to the hands of the purchaser, it is no longer within the limits of the monopoly.”).
27 Adams, 84 U.S. at 454.
were sold to plaintiff Adams.\textsuperscript{28} Undertaker-defendant Burke purchased Boston-sold Lockhart & Seelye coffin lids, which Burke then used in his Natick mortuary on the shores of Lake Cochituate.\textsuperscript{29} Natick is more than ten miles from Boston and thus squarely within the territorial patent rights of Adams.\textsuperscript{30} But, because Burke purchased the patented coffin lids in Boston, the patent rights were “exhausted” and thus, Burke could not be a patent infringer as a legitimate purchaser from the patentee.\textsuperscript{31}

\textbf{B. Univis Extension of Adams v. Burke}

The doctrine of patent exhaustion could, at first blush, be circumvented by the patentee selling \textit{unpatented} goods to the initial purchaser, whereupon the initial purchaser would convert the product into a patent protected product. Then, under this supposed loophole, the purchaser's customer of the patent protected goods would be an infringer. Whatever theoretical basis may have existed for this loophole, it was plugged in \textit{United States v. Univis Lens Co., Inc.},\textsuperscript{32} the eyeglass lens case.\textsuperscript{33} The \textit{Univis} patent covered finished optical eyeglass lenses.\textsuperscript{34} The patentee did not sell the patented eyeglass lenses to finishers; rather, the patentee sold unpatented lens blanks to the finishers.\textsuperscript{35} The only use of the eyeglass lens blanks was to have them polished to create finished – and patented – eyeglass lenses.\textsuperscript{36} Here, the patentee sought a double reward of whatever price it could command from the eyeglass lens finisher \textit{and} – under the patent – from the finisher’s customers for use or sale of the patent-protected finished eyeglass lenses.

As summarized in \textit{Quanta}:

\begin{quote}
[Univis] licensed a purchaser to manufacture lens blanks by fusing together different lens segments \ldots and to sell them to other Univis licensees at agreed-upon rates. Wholesalers were licensed to grind the blanks into the patented finished lenses, which they would then sell to Univis-licensed prescription retailers for resale at a fixed rate. Finishing retailers, after grinding the blanks into patented lenses, would sell the finished lenses to consumers at the same fixed rate.\textsuperscript{37}
\end{quote}

Thus, in the classic sense, there was no exhaustion of the patent on finished lenses by Univis’ sales to the wholesalers because the claims of the patents in suit did not cover anything other than the finished lenses.\textsuperscript{38} Nevertheless, the patent rights

\textsuperscript{28} \textit{Id.}
\textsuperscript{29} \textit{Id.}
\textsuperscript{30} \textit{Id.}
\textsuperscript{31} \textit{Id. at 457.}
\textsuperscript{32} 316 U.S. 241 (1942).
\textsuperscript{33} \textit{Id. at 243–44.}
\textsuperscript{34} \textit{Id.}
\textsuperscript{35} \textit{Id. at 246–47.}
\textsuperscript{36} \textit{Id.}
\textsuperscript{37} \textit{Id. at 243–44.}
\textsuperscript{38} \textit{Quanta Computer, Inc. v. LG Elecs., Inc., 128 S. Ct. 2109, 2116 (2008).}
\textsuperscript{39} \textit{Id.}
were held to have been exhausted because the patented invention was “practiced in part by the wholesalers and finishing retailers who ground the blanks into [eyeglass] lenses, [such that] the sale of the lens blanks exhausted the patents on the finished eyeglass lenses.” Thus, “the lens blanks embodied essential features of the patented device and [were] without utility until... ground and polished as the finished lens of the patent.”

The patent exhaustion rule of Univis for sale of an uncompleted article is thusly:

[W]here one has sold an uncompleted article which, because it embodies essential features of his patented invention, is within the protection of his patent, and has destined the article to be finished by the purchaser in conformity to the patent, he has sold his invention so far as it is or may be embodied in that particular article.

The rule of Univis was restated more broadly in Quanta: “[T]he Court concluded in Univis that the traditional bar on patent restrictions following the sale of an item applies when the item sufficiently embodies the patent—even if it does not completely practice the patent—such that its only and intended use is to be finished under the terms of the patent.”

II. FEDERAL CIRCUIT EVISCERATION OF PATENT EXHAUSTION

The doctrine of patent exhaustion undeniably erodes the ability of a patentee to optimize profits from patented technology by limiting a patentee’s control of patented goods only up through its first sale of such goods or its licensee’s first sale of such goods.

The Univis fact pattern provides an excellent example of precisely how profits can be maximized, but for patent exhaustion: The owner of the patent on finished eyeglass lenses could extract a patent-based royalty from its immediate customers, the lens blank finishers and from the downstream sellers of the finished products. There are numerous other scenarios where profits can be more greatly maximized through the patentee’s control of patented products after the first sale.

When the Federal Circuit was established in 1982, it was done so seemingly with a mandate for the new court to create a uniform body of patent law for the United States. It was implicit to many in the patent community that this mandate included the mandate to redraft arcane provisions of the patent law that disfavored

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39 Id. (citing Univis, 316 U.S. at 248-49).
40 Id. (quoting Univis, 316 U.S. at 249) (alterations in original).
41 Id. at 2116-17 (quoting Univis, 316 U.S. at 250-51).
42 Id. at 2117.
43 See Univis, 316 U.S. at 250.
innovation, including ancient Supreme Court doctrines. Patent exhaustion was an early victim of this perceived mandate.\textsuperscript{46}

\textbf{A. Bandag Method Claims to Avoid Exhaustion}

Within the second full year of the new court’s existence, a gaping loophole was created in the doctrine of patent exhaustion that would empower a patentee to completely avoid \textit{Adams} and \textit{Univis} through a simple trick of claim drafting: If the patented technology were defined in a patent claim as a claim a \textit{method} involving the technology (as opposed to a claim to the product, itself), the Federal Circuit in \textit{Bandag, Inc. v. A B Bolser’s Tire Stores, Inc.}\textsuperscript{47} held that patent exhaustion did not apply.\textsuperscript{48}

Professor John R. Thomas explained the easy circumvention of patent exhaustion through the \textit{Bandag} loophole: craft method claims instead of product claims and the problem is solved.\textsuperscript{49} Professor Thomas “recommend[ed] this strategy [of using method claims instead of product claims] as a way to draft patent claims that ‘will survive numerous transactions regarding the patented good, allowing the force of the patent to intrude deeply into the stream of commerce’.”\textsuperscript{50} Indeed, it is a simple matter of claim draftsmanship that even a journeyman patent agent or attorney can accomplish. Professor Thomas confirmed that “[e]ven the most novice claims drafter would encounter scant difficulty in converting a patent claim from [product] to [method] and back again”.\textsuperscript{51}

In \textit{Bandag}, the court’s \textit{entire} treatment of patent exhaustion is found in one single sentence: “[t]he [\textit{Univis}] doctrine that the first sale by a patentee of an article embodying his invention exhausts his patent rights in that article, . . . is inapplicable here, because the claims of the . . . patent are directed to a ‘method . . . ’ and cannot read on the [accused infringing] equipment.”\textsuperscript{52}

The Supreme Court in \textit{Quanta} overruled \textit{Bandag, sub silentio}, also without citation of the case; it noted that “[e]liminating exhaustion for method patents would seriously undermine the exhaustion doctrine.”\textsuperscript{53} “Patentees seeking to avoid patent exhaustion could simply draft their patent claims to describe a method rather than an apparatus.”\textsuperscript{54}

\begin{itemize}
\item 750 F.2d 903 (Fed. Cir. 1984).
\item \textit{Id.} at 924.
\item \textit{Quanta}, 128 S. Ct. at 2118 (quoting Thomas, \textit{supra} note 49, at 252).
\item Thomas, \textit{supra} note 49, at 225–26.
\item \textit{Bandag}, 750 F.2d at 924 (citations omitted).
\item \textit{Quanta}, 128 U.S. at 2117.
\item \textit{Id.}
\end{itemize}
B. Mallinckrodt Contractual Proscription of an Implied Licensed

1. Contract Law Trumps Patent Exhaustion

Following the elevation of contract law proscriptions on post-sale activities in Mallinckrodt v. Medipart, the court in B. Braun Med. Inc. v. Abbott Labs established a principle that contractual restrictions could vitiate an implication that a purchaser from a patentee had an implied license to use patented goods, thereby trumping patent exhaustion.

B. Braun was most recently characterized by the Federal Circuit in the following manner: "The exhaustion doctrine . . . 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.

2. B. Braun Stretching Mallinckrodt

The patent community from most industries enthusiastically embraced Mallinckrodt as being a very pro-patent evolution. Commencing with this case and as further stretched in B. Braun, much of the doctrine of patent exhaustion could be side-stepped through contract – or "private legislation."

3. Mixed Public Policy Signals

But, there are two sides to the public policy debates. Professor Winston explains that "[c]ourts have allowed restrictions on the future rights of the purchaser of a chattel that embodies patented ideas even when the chattel is sold if notice is given of the restrictions, such restrictions are within the scope of the patent grant, and the patent rights have not yet been exhausted."

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55 976 F.2d 700 (Fed. Cir. 1992).
56 124 F.3d 1419 (Fed. Cir. 1997).
57 Id. at 1426.
59 Id.
61 See Richard H. Stern, Post Sale Patent Restrictions After Mallinckrodt – An Idea in Search of Definition, 5 ALB. L.J. SCI. & TECH. 1, 8 (1994) (contending that “if followed as a precedent, Mallinckrodt would permit patentees to accomplish many things that previously were infeasible,” like maximizing profits in niche markets).
62 B. Braun, 124 F.3d at 1419.
63 Id. at 1426 (finding that the exhaustion doctrine does not apply to an expressly conditional sale or license because 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).
64 Winston, supra note 44, at 108 (citing Mallinckrodt, 976 F.2d at 700; B. Braun, 124 F.3d at 1426; Ariz. Cartridge Remfrs. Ass’n v. Lexmark Int’l, Inc., 421 F.3d 981 (9th Cir. 2005)).
She adds that “if a party violates a restriction on a sale, the patent holder can sue that party for patent infringement, which is likely to be a more lucrative action than breach of contract for violating a license restriction.”

Professor First suggests that:

[the only plausible explanation for the court’s decision in Mallinckrodt is that it took the view that the best approach to patent licensing is to allow the patentee to impose whatever restrictions will maximize its returns, without regard to whether those excess returns are necessary to incentivize innovation and without regard to the costs those restraints impose on consumers.]

III. QUANTA, THE REVERSE PENDLUM SWING

The pendulum continued to swing further toward the rights of the patentee as manifested by the denial of patent exhaustion to protect purchasers of patented seeds in several Monsanto cases, ultimately further extended in LG Elecs., Inc. v. Bizcom Elecs., Inc. – the case appealed to the Supreme Court in Quanta.

A. The Quanta Licensing Strategy

The LGE patent exploitation scheme in Quanta focused upon the key elements of the Federal Circuit’s erosion of the exhaustion doctrine. It took advantage of method claims that Bandag held did not invoke patent exhaustion and also took

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65 Winston, supra note 44, at 108. “In a suit for patent infringement, ‘damages may be enhanced up to three times the compensatory award.’” Id. at 108 n.65 (citing 35 U.S.C. § 284 (2006); Read Corp. v. Portec, Inc., 970 F.2d 816, 826 (Fed. Cir. 1992)). “In a suit for breach of contract, damages must reflect the intentions of the parties at the time they entered into the contract and cannot be punitive—in other words, they can only be compensatory.” Id. (citing E. ALLAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 12.8 (C) (2d ed. 1998)).


The advantage of the denial of patent exhaustion in *B. Braun* by virtue of the absence of a purchasers' implied license.69

LGE owned a group of patents that could be used to control both computer chips, *per se*, as well as downstream computer systems incorporating such chips.70 Instead of gaining modest royalties by licensing Intel to make and sell the chips, a greater reward was seen from the downstream computer patents that could be asserted against computer manufacturers, even though they purchased chips where Intel had paid its patent licensing fee.71 Of course, but for Federal Circuit case law, an exhaustion ruling based upon the sale of the chips to Intel would free the computer manufacturers from patent obligations under the "exhausted" patent right.72

LGE took full advantage of the Federal Circuit case law. First of all, the license to Intel made it clear that LGE was not giving any patent right to the computer manufacturers who would purchase the chips from Intel73; the license to Intel was clearly under circumstances envisioned under *B. Braun* whereby there would be no implied license to the computer manufacturers.74 Second, Intel was not licensed under "system" method claims which could only be infringed upon assembly of the computer including the chips – although the only use of the chips was for the computer system.75 In this manner, LGE could extract money from Intel for a license to manufacture its chips and seek license royalties from the downstream purchasers, the computer manufacturers. Additionally, the license to Intel did not include several patents necessary to cover the computer in combination with the chips that would be infringed by the computer manufacturer but not Intel.76

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69 See *Quanta*, 128 S. Ct. at 2117 (noting that method claims were contained in each of the licensed patents); *id.* at 2114. LGE's licensed a patent portfolio to Intel Corporation ("Intel") for Intel to make products using the LGE patents ("Intel products"). *Id.* As part of the Master Agreement with LGE, Intel agreed to notify its customers that Intel's license did not extend to any product which combined Intel products with any non-Intel products. *Id.*

70 See *Quanta*, 128 S.Ct at 2113–14 (describing the relevant uses of LGE's patents and how they are necessary both in Intel's computer chips and in potential downstream computer systems); U.S. Patent No. 5,379,379 (filed Sep. 6, 1990); U.S. Patent No. 5,077,733 (filed Sep. 11, 1989); U.S. Patent No. 4,939,641 (filed Jun. 30, 1988).

71 See *Winston*, supra note 44, at 101 (noting that intellectual property owners might use licenses to "acquire rights, monopolistic in nature, that can used to influence the market").

72 See generally *McFarling*, 302 F.3d 1291 (Fed. Cir. 2002) (holding that the patent rights in a second generation of seeds are not exhausted by the sale of the first generation because the second generation of seeds, unlike the first generation, was not the subject of any sale); *B. Braun Med., Inc. v. Abbott Labs.,* 124 F.3d 1419 (Fed. Cir. 1997) (allowing a license contract to explicitly deny the existence of any implied licenses); *Bandag, Inc. v. Al Bolster’s Tire Stores, Inc.,* 750 F.2d 903 (Fed. Cir. 1984) (holding that patent exhaustion does not apply to method claims).

73 *Quanta*, 128 S. Ct. at 2114.

74 See generally *B. Braun*, 124 F.3d at 1419 (holding that the terms of a contract can eliminate any implied licenses).


76 See Brief of Respondent at 17, *Quanta*, 128 S. Ct. 2109 (No. 06-937) ("The components sold to petitioners by Intel are patented, but those patents are not the patents in suit.").
B. The Supreme Court Abruptly Stems a Pro-Patentee Swing

The concluding paragraph of *Quanta* states the general conclusion on the state of the law of patent exhaustion:

The authorized sale of an article that substantially embodies a patent exhausts the patent holder's rights and prevents the patent holder from invoking patent law to control postsale use of the article. Here, LGE licensed Intel to practice any of its patents and to sell products practicing those patents. Intel's [chips] substantially embodied the LGE patents because they had no reasonable noninfringing use and included all the inventive aspects of the patented methods. Nothing in the License Agreement limited Intel's ability to sell its products practicing the LGE patents. Intel's authorized sale to Quanta thus took its products outside the scope of the patent monopoly, and as a result, LGE can no longer assert its patent rights against [downstream computer manufacturer] Quanta.\(^7\)

The Court restated the law of patent exhaustion in a manner to overrule both *Bandag* and *B. Braun*; it further expanded the doctrine of patent exhaustion insofar as post-*Quanta*, patent exhaustion now more broadly covers exhaustion of patents not recited in the license as well as the practice of technology that does not infringe any patent, but which can only be used in a manner by customers that would infringe a patent.\(^8\)

1. Expansion of the Univis Exhaustion Doctrine

a. A Component Incompletely Using the Patented Invention

Sale or license of a product that does not fall under a patent nevertheless exhausts the patent right if the product "embod[ies] the essential features" of the patent and incorporates "all the inventive processes."\(^9\) As more fully stated by the Court in *Quanta*, in both *Univis* and in *Quanta* a final step is needed to create the patented invention.\(^10\) But, if that final step is "common and noninventive," the doctrine of patent exhaustion applies where the final step "embod[ies] the essential features of the [patents] because they carry out all the inventive processes when combined, according to their design, with standard components."\(^11\)

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\(^7\) *Quanta*, 128 S. Ct. at 2122.

\(^8\) See id.

\(^9\) Id. at 2120.

\(^10\) See id.

\(^11\) Id.

But we think that the nature of the final step, rather than whether it consists of adding or deleting material, is the relevant characteristic. In *Univis* and *Quanta*, the final step to practice the patent is common and noninventive: grinding a lens to the customer's prescription, or connecting a microprocessor or chipset to buses or memory. The Intel Products embody the essential features of
b. Unlicensed Patents Infringed by the Downstream Purchaser

But, what happens if in addition there are patents that are only practiced by the downstream purchaser (the computer manufacturer)? Exhaustion rights under the licensed patent are meaningless if the unlicensed patents are also not exhausted. This is precisely the situation in Quanta:

[W]e agree on the general principle [that exhaustion does not apply across patents]: The sale of a device that practices patent A does not, by virtue of practicing patent A, exhaust patent B. But if the device practices patent A while substantially embodying patent B, its relationship to patent A does not prevent exhaustion of patent B.8

2. Bandag Method Claim Exclusion is Overruled

In 1984 in Bandag, the Federal Circuit ruled that method patents cannot be exhausted.83 Professor Thomas explains that “the most novice claims drafter” could circumvent patent exhaustion by creation of method claims presented perhaps the single most compelling reason why Bandag had to be overturned.84 The Court did not discover Thomas’ work on its own, but rather had it spoon fed to the Court in an extensive quotation in Petitioner’s merits brief.85 What, precisely, did the LGE argue to refute Thomas’ charge? Was the Thomas scenario really so simple that any novice could circumvent exhaustion? What, precisely, did the several amici supporting the patentee say about the ease of creation of method claims? Precisely, LGE said absolutely nothing to rebut the argument based on Thomas. Did the LGE think that by ignoring the Petitioner’s argument, the Court would ignore the argument, also?

Bandag was therefore overruled sub silentio, with the statement in Quanta that “[n]othing in this Court’s approach to patent exhaustion supports LGE’s argument that method patents cannot be exhausted.”86 The Court further stated:

the LGE Patents because they carry out all the inventive processes when combined, according to their design, with standard components.

Id.

82 Id. Immediately thereafter, the Court added:

For example, if the Univis lens blanks had been composed of shatter-resistant glass under patent A, the blanks would nonetheless have substantially embodied, and therefore exhausted, patent B for the finished lenses. . . . While each Intel microprocessor and chipset practices thousands of individual patents, including some LGE patents not at issue in this case, the exhaustion analysis is not altered by the fact that more than one patent is practiced by the same product. The relevant consideration is whether the Intel Products that partially practice a patent—by, for example, embodying its essential features—exhaust that patent.

Id. at 2120-21.

84 Thomas, supra note 49, at 225.
85 Brief for Petitioners at 38 n.11, Quanta, 128 S. Ct. 2109 (No. 06-937) (quoting Thomas, supra note 49, at 225).
86 Quanta, 128 S. Ct. at 2117.
It is true that a patented method may not be sold in the same way as an article or device, but methods nonetheless may be “embodied” in a product, the sale of which exhausts patent rights. Our precedents do not differentiate transactions involving embodiments of patented methods or processes from those involving patented apparatuses or materials.87

Whereas the Federal Circuit Bandag panel had dismissed Univis as not applying to method patents with no further discussion of other Supreme Court case law, the Court in Quanta stated “[t]o the contrary, this Court has repeatedly held that method patents were exhausted by the sale of an item that embodied the method.”88 The Court characterized Ethyl Gasoline as “[holding] that the sale of a motor fuel produced under one patent also exhausted the patent for a method of using the fuel in combustion motors.”89 The Univis case itself also provides support for patent exhaustion keyed to method claims.90

Sub silentio, the Court disapproved Bandag:

[Quanta] illustrates the danger of allowing [the Bandag] end-run around exhaustion. On LGE’s theory, although Intel is authorized to sell a completed computer system that practices the LGE patents, any downstream purchasers of the system could nonetheless be liable for patent infringement. Such a result would violate the longstanding principle that, when a patented item is “once lawfully made and sold, there is no restriction on [its] use to be implied for the benefit of the patentee”91

Sub silentio, the Court overruled Bandag: “We therefore reject LGE’s argument that method claims, as a category, are never exhaustible.”92

3. B. Braun Implied License Trumped by Patent Exhaustion

The Court finds that the issue of an absence of implied license to Intel’s customers is moot because there is patent exhaustion.93 The Court first noted that LGE had “point[ed] out [to the Court] that the License Agreement [to Intel]

87 Id.
88 Id.
89 Id. “The patentee held patents for (1) a fluid additive increasing gasoline efficiency, (2) motor fuel produced by mixing gasoline with the patented fluid, and (3) a method of using fuel containing the patented fluid in combustion motors.” Id. at 2117 n.4 (citing Ethyl Gasoline Corp. v. United States, 309 U.S. 436, 446 (1940)). “The patentee sold only the fluid, but attempted to control sales of the treated fuel.” Id. (citing Ethyl Gasoline, 309 U.S. at 459). “The Court held that the sale of the fluid to refiners relinquished the patentee’s exclusive rights to sell the treated fuel.” Id. (citing Ethyl Gasoline, 309 U.S. at 457).
90 Quanta, 128 S. Ct. at 2117 (“Univis held that the sale of optical lens blanks that partially practiced a patent exhausted the method patents that were not completely practiced until the blanks were ground into lenses.” (citing United States v. Univis Lens Co., Inc., 316 U.S. 241, 248–51 (1942))).
91 Id. at 2118 (quoting Adams v. Burke, 84 U.S. 453, 457 (1873)).
92 Id.
93 See id. at 2122.
specifically disclaimed any license to third parties to practice the patents by combining licensed products with other components.94

Sub silentio overruling B. Braun, the Court concludes: “But the question whether third parties received implied licenses is irrelevant because Quanta asserts its right to practice the patents based not on implied license but on exhaustion. And exhaustion turns only on Intel's own license to sell products practicing the LGE Patents.”95

IV. POST-QUANTA QUESTIONS THAT REQUIRE RESOLUTION

A. Contractual Issues Expressly Left Open in Quanta

*Quanta* does not resolve the viability of the many contractual restrictions that a patentee may place on his purchaser, a wise application of judicial restraint by the Court.96

At first blush, particularly when reading the opinion of the Federal Circuit below, it would appear that the question of patent exhaustion may have been subservient to contractual provisions in the license from LGE to Intel.97 But, the Court reached its conclusion of freedom from patent liability strictly keyed to patent exhaustion principles, without resorting to any contractual proscriptions in the license agreement.98

Thus,

[the License Agreement authorized Intel to sell products that practiced the LGE patents. No conditions limited Intel's authority to sell products substantially embodying the patents. Because Intel was authorized to sell its products to Quanta, the doctrine of patent exhaustion prevents LGE from further asserting its patent rights with respect to the patents substantially embodied by those products.99

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94 Id.
95 Id. The Court adds:
   Alternatively, [the patentee] invokes the principle that patent exhaustion does not apply to post-sale restrictions on 'making' an article. . . . But this is simply a rephrasing of its argument that combining the Intel Products with other components adds more than standard finishing to complete a patented article. As explained above, making a product that substantially embodies a patent is, for exhaustion purposes, no different from making the patented article itself. In other words, no further 'making' results from the addition of standard parts . . . to a product that already substantially embodies the patent.
Id. (citation omitted).
96 See id. at 2121–22.
98 See Quanta, 128 S.Ct. at 2121–22.
99 Id. at 2122.
That the door remained open to contract issues is expressly stated by the Court: "[w]e note that the authorized nature of the sale to Quanta does not necessarily limit LGE’s other contract rights. LGE’s complaint does not include a breach-of-contract claim, and we express no opinion on whether contract damages might be available even though exhaustion operates to eliminate patent damages."  

It was indeed appropriate for the Court to show restraint and refrain from going into the question whether Mallinckrodt should remain viable law. The Respondent, who had relied upon the Mallinckrodt line of case law in proceedings below, had retreated at the Court had did not even defend the decision at oral argument.

B. Post-Quanta Post-Sale Restrictions

1. Restrictions on Reproduced Bio-Products: The Quanta Loophole

Biotechnology presents a whole new factual context in which to consider patent exhaustion. Modern biotechnology was unforeseen at the time of Univis more than sixty-five years ago and there is scant guidance given in Quanta: When a self-replicating living invention is sold, does the purchaser have a right to reproduce that invention to make one—or thousands or more—copies?  

The question is squarely raised for both modern biotechnology-engineered seeds as well as for cultures of microorganisms.

Seed patents provide a prime example in the context of post-Quanta patent exhaustion where a public policy conclusion has been stated as basis for a denial of exhaustion, where the Federal Circuit has already spoken.

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100 Id. at 2122 n.7.

Whether a patentee may protect himself and his assignees by special contracts brought home to the purchasers is not a question before us, and upon which we express no opinion. It is, however, obvious that such a question would arise as a question of contract, and not as one under the inherent meaning and effect of the patent laws.

Id. (quoting Keeler v. Standard Folding Bed Co., 157 U.S. 659, 666 (1895)).

101 Transcript of Oral Argument at 34, Quanta, 128 S. Ct. 2109 (2008) (No. 06-937). At the oral argument, the following was expressly stated by the patentee’s counsel:

Justice Stevens: Am I correct in understanding that you do not defend the Mallinckrodt decision?

[LGE’s Counsel]: I do not defend the Mallinckrodt decision, Justice Stevens, and clearly I don’t believe I have to. All I need to do is have this Court recognize that the central limiting feature of Univis was the fact that it was all one patent and that all you were doing was fulfilling the rights that had been provided for you in that single patent, and that that’s fundamentally — and that the Court recognized that if there were a separate patent involved and you were trying to enforce those rights, that would be a completely different matter.

Id.

102 See Scruggs, 459 F.3d 1328, 1336 (Fed. Cir. 2006) (stating that “the fact that a patented technology can replicate itself does not give a purchaser the right to use replicated copies of the technology.”).

103 See id.; see also McFarling, 302 F.3d 1291, 1299 (Fed. Cir. 2002) (holding that the agreement did not violate the doctrines of first sale or patent exhaustion because the new seeds
One of the grounds to deny patent exhaustion is stated in *Monsanto Co. v. Seruggs* where the court concludes that a contrary conclusion would have "eviscerate[d] the rights of the patent holder." There is no citation of any authority for or against this position nor is there any public policy position taken for an alternative ground to deny the application of patent exhaustion.

a. Open Questions for Viable Patent-Based Biotechnology Protection

*Seruggs* is open to scrutiny based upon *Quanta*. Although not carried forward in the opinion itself, an issue raised during oral argument focuses upon whether a farmer can "now freely harvest, sell or replant the progeny seeds," freed from patent law restrictions, "assuming that the patent covers the seeds, themselves or the method of growing such seeds."

To be sure, there are also countering arguments that remain for consideration, including the point that a patentee's sale of seed "does not relinquish a patentee's rights in progeny seeds because such progeny seeds are not [the subject of a sale.]"

Yet to be determined is whether or how the *Quanta* interpretation of *Univis* should be applied to seed patent exhaustion.

"First, do first-generation seeds sold to farmers have 'any reasonable noninfringing use' besides being planted to grow crops in which the production of progeny seeds is inherent?

Presumably, rather than being planted using a grown from the original batch had never been sold as the price paid by the purchaser reflects on the value of the "use" rights conferred by the patentee."

104 *Seruggs*, 459 F.3d at 1328.

105 *Id.* at 1336 ("Applying the first sale doctrine to subsequent generations of self-replicating technology would eviscerate the rights of the patent holder."). The court reasoned "[t]he fact that a patented technology can replicate itself does not give a purchaser the right to use replicated copies of the technology." *Id.*

106 *McFarling*, 302 F.3d at 1299 ("[T]he 'first sale' doctrine of exhaustion of the patent right is not implicated, as the new seeds grown from the original batch had never been sold."); *see also* *Seruggs*, 459 F.3d at 1336 ("Without the actual sale of the second generation seed to Scruggs, there can be no patent exhaustion."). The referenced opinion while directly on point similarly does not cite any academic or other study, but only a single precedent of the Court that has either been distinguished or overruled in *Quanta*.

107 *See* *Baluch*, *supra* note 9; *see also* Transcript of Oral Argument, *supra* note 101, at 15–16 (question of Justice Kennedy) ("Are there cases where some downstream restrictions on use might be necessary to prevent the patent from becoming worthless, i.e., in the biological area for replication of seeds in agriculture and so forth?").

108 *Baluch*, *supra* note 9. "Thus, according to ASTA [American Seed Trade Association], no exhaustion would arise over progeny seeds because the price charged for an original seed reflects the value of the article sold (per *Univis* or 'that item' (per *Quanta*), namely, the first-generation seeds." *Id.*

109 *Baluch*, *supra* note 9 (footnote omitted) (quoting *Quanta*, 128 S. Ct. at 2122).
patented method, the first-generation seeds can be used as food or feed. It can be debated, however, whether this is a reasonable use of such seeds.”

The question of “inventive” contributions is also part of the Quanta equation. Thus, as the second inquiry, “do the first-generation seeds include ‘all the inventive aspects of the patented methods’?” In Univis and Quanta, the answer was yes because the steps performed by the buyer were common and noninventive: grinding a lens to the customer’s prescription, or connecting a microprocessor or chipset to buses or memory.” “In the case of a patented method of growing crops, does the farmer perform any additional, inventive steps besides the (presumably standard) steps of watering and fertilizing the first-generation seeds? This again is a fact question that depends on what was sold and what was patented.”

b. Bailment and other Non-Patent Biotechnology Alternatives

Clearly, while biotechnology pioneers will push for a limited application of patent exhaustion in their particular technologies, alternatives also must be explored. In the wake of Quanta and the uncertain waters of patent “exhaustion,” biotechnology transfers may in some instances be based upon a bailment instead of a license. “Bailment is and will continue to be a useful legal tool for transferring biological material. However, its application is limited by the doctrine of accession, which forces the putative bailor to prohibit commingling of bailed biological materials with other biological materials.” However, there are limitations to bailment as an alternative to licensing:

[Blailment is best suited for biological materials which are fully developed products capable of commercial use in their existing form or for biological materials which will be transformed in a predictable way. On the other hand, joint ownership, sales, and conditional sales are useful alternatives for parties who intend to combine their biological materials and create new products.

c. The Likelihood of Further Seed Patent Cases

Subsequent to the certiorari petition in Quanta, the Court was presented with the question of patent exhaustion of seeds in the context of a damages assessment in

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110 Id. (emphasis added).
111 See Quanta, 128 S. Ct. at 2120.
112 Baluch, supra note 9.
113 Id.
114 Id.
115 Stephen B. Maebius, Biotech Transfers: From Bailing Mice to Solling Hybridomas, 76 J.
PAT. & TRADEMARK OFF. SOCY 601, 604-05 (1994) (discussing the application of bailment and sales to transfers of biological material).
116 Id. at 613.
117 Id.
yet a further Monsanto case; it denied certiorari prior to the merits consideration in Quanta.\textsuperscript{118}

While the question of seed patent exhaustion is at first blush most important to this narrow aspect of industry, the implications are far wider in scope.\textsuperscript{119} As pointed out by Baluch, "[t]he debate, of course, is not limited only to seeds, but implicates any product that can make copies of itself: self-replicating cell lines, genetic material, and even software. It now remains for the next seed patent infringement case to reach the Federal Circuit and, possibly, the Supreme Court."\textsuperscript{120}

\textbf{C. Post-Quanta International Patent Exhaustion}

To be sure, there is \textit{dictum} that suggests that there is no international patent exhaustion that may be found from the wording of Boeseb v. Graff.\textsuperscript{121} Without recognition of factual differences from Boeseb, a panel in Jazz Photo Corp. v. Int'l Trade Comm'n\textsuperscript{122} found that there is no exhaustion based on a sale under a foreign patent: "To invoke the protection of the first sale doctrine, the authorized first sale must have occurred under the United States patent."\textsuperscript{123}

\textit{Boeseb} has nothing to do with patent exhaustion because there was no patent right, German or otherwise, that was exercised.\textsuperscript{124} \textit{Boeseb} dealt with the right of a party to import and sell in the United States a patent-protected stove from Germany where the manufacturer of the German stove was exempt from patent infringement under German law due to the operation of a prior user right statute.\textsuperscript{125}

\textit{Boeseb} has received little exposure in the case law apart from \textit{dictum} on other points of law. Nearly a century ago in \textit{dictum} in A. Bourjois & Co., Inc. v. Katz,\textsuperscript{126} the Supreme Court reiterated the general principle that there is no international patent exhaustion and more recently in Microsoft Corp. v. AT&T,\textsuperscript{127} the Court supported the principle of patent territoriality by citing Boeseb: "[O]ur 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: and we correspondingly reject the claims of others to such control over our markets."\textsuperscript{128}

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\textsuperscript{118} Petition for a Writ of Certiorari at i, McFarling v. Monsanto Co., 128 S. Ct. 871 (2007) (No. 07-241) ("Do[es] the doctrine[] of patent exhaustion . . . permit the purchaser of a patented good to use that good and dispose of its products as it sees fit, absent a valid contract?").

\textsuperscript{119} Baluch, \textit{supra} note 9.

\textsuperscript{120} \textit{Id}.

\textsuperscript{121} 133 U.S. 697, 701–03 (1890).

\textsuperscript{122} 264 F.3d 1094 (Fed. Cir. 2001).

\textsuperscript{123} \textit{Id}. at, 1105 ("A lawful foreign purchase does not obviate the need for license from the United States patentee before importation into and sale in the United States.") (citing Boeseb, 133 U.S. at 701–03).

\textsuperscript{124} Boeseb, 133 U.S. at 701–702.

\textsuperscript{125} \textit{Id} at 703–04.

\textsuperscript{126} 260 U.S. 689, 692 (1923) (citing Boeseb, 133 U.S. at 702–03). "If the goods were patented in the United States a dealer who lawfully bought similar goods abroad from one who had a right to make and sell them there could not sell them in the United States." \textit{Id}.

\textsuperscript{127} 127 S. Ct. 1746, 1752 (2007).

\textsuperscript{128} \textit{Id}. (quoting Deepsouth Packing Co. v. Laitram Corp., 406 U.S. 518, 531 (1972)).
CONCLUSION


_Quanta_, above all, should be a warning to the patent community that it is far better to have the Federal Circuit shape the patent law than to have occasional guidance from the Supreme Court. The Federal Circuit can best avoid _certiorari_ by the creation of a body of case law that is consistent with the precedent of the Court, which may require departures from time to time that should be implemented incrementally, always with the aid of consensus public policy debates. As Professor Eisenberg has noted, “the Supreme Court has granted _certiorari_ when it believes the Federal Circuit has departed from the Supreme Court’s own patent law decisions.” With the Court actually intervening with a grant of _certiorari_ so rarely, it is difficult to see that body fine-tuning precedent. Moreover, “unfortunately, the Supreme Court’s own patent jurisprudence is mostly quite old, limiting its value as a guide to the most pressing unresolved issues today.”

It now remains to be seen how the contours of patent exhaustion will be shaped by the Federal Circuit, both with respect to “living” inventions such as seeds, as well as, the more macroscopic issue of international patent exhaustion.

B. A Cautionary Note Against “Dynamic Judicial Interpretation”

While it may be true that the Federal Circuit is a better forum for the incremental evolution of patent law, at the same time the Supreme Court has been seemingly goaded into reviewing patent doctrines from the Federal Circuit. This is particularly true where, as in _Quanta_, the Federal Circuit has repudiated Supreme Court precedent, albeit rather old, outright with simple conclusions of law showing little or incorrect understanding of Supreme Court precedent and generally without apparent consideration of scholarly or other studies that have pointed to a need for refinement of doctrines.

Naked policy grounds as basis to depart from Supreme Court precedent have been relied upon either explicitly or _sub silentio_ in Federal Circuit repudiations or refinement of older cases. _Quanta_ is but the latest of several Supreme Court responses to such Federal Circuit judicial activism. For example, in _Microsoft_, Justice Ginsburg sounded a cautionary note: “[w]hile the majority’s concern [over public policy in _Microsoft_] is understandable, we are not persuaded that dynamic judicial interpretation of [the statute] is in order. The ‘loophole,’ in our judgment, is properly left for Congress to consider, and to close if it finds such action

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130 See also id. (asserting that the Supreme Court has granted _certiorari_ on a small set of patent cases).
131 Id.
132 See id.
It may now be expected that the Federal Circuit will be much more reluctant to set forth on a path divergent from the Supreme Court and, if circumstances dictating a change make this desirable, the court will surely provide evidence in the form of economic or other academic studies before it closes any further "loopholes".

The blueprint for successful certiorari review of naked public policy conclusions is found in KSR Intern. Co. v. Teleflex Inc., where Professor John Fitzgerald Duffy in his certiorari petition portrayed Federal Circuit obviousness precedent as yielding a "divergence between th[e] Court's precedents and existing Federal Circuit precedent [which] is so blatant that commentators and casebook editors in the field of patent law routinely describe the Federal Circuit's precedents on [35 U.S.C.]§ 103 as 'abolish[ing], 'ignor[ing], ' or 'dismissing' controlling Supreme Court precedent."

C. Patent Reform Legislation

With the demise of much needed macroscopic statutory patent reform in the current 110th Congress, it is inevitable that some form of patent reform legislation will be reintroduced in 2009 in the Congress in the coming 111th Congress.

Will the proscription against international patent exhaustion that follows the dictum from Boesbch be codified? Or, should some change be engineered? Will consideration be given to creation of a statutory provision to establish the right of a patentee to control the second generation products that are produced in nature?

While patent legislation specific to deal with the problems of patent exhaustion might be difficult to propose in a normal legislative setting, here, with patent reform being a center stage item, it should be more feasible to introduce whatever fair legislation may be devised as part of the overall legislative package.


134 Wegner, supra note 133, at 40 (stating that in Microsoft the Federal Circuit majority reached their holding without citation of any economic study or scholarly work); see also Eisenberg, supra note 129, at 33 (contending that for the Federal Circuit to avoid diminishing its authority, it should "like any prudent parent, should pick its battles with care)."

135 Petition for Writ of Certiorari at 11–12, KSR Intern. Co. v. Teleflex Inc., 127 S. Ct. 1727 (2007) (No. 04-1350), available at 2005 WL 835463. In the KSR petition, the abrogation of Supreme Court precedent was boldly portrayed:

Less than a year into its history, in 1983, the Federal Circuit boldly repudiated the “test of validity of combination patents” that this Court had applied in Sakraida and Anderson's-Black Rock, and numerous prior cases over a 100+ year period, on the basis that there purportedly was “no warrant” for this Court's case law treatment of combination patents and the very concept of a "combination patent" was purportedly “meaningless.”

Id. at 16.