The Licensed-Foundry Defense in Patent Infringement Cases: Time to Take Some of the Steam out of Patent Exhaustion?

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THE LICENSED-FOUNDRY DEFENSE IN PATENT INFRINGEMENT CASES: TIME TO TAKE SOME OF THE STEAM OUT OF PATENT EXHAUSTION?

INTRODUCTION

In 1852 the United States Supreme Court first recognized the common law doctrine of patent exhaustion (also known as the "first sale" doctrine). Under this doctrine, the first authorized sale of a patented product "exhausts" the patentee's monopoly with respect to that particular product. Although the doctrine is relatively straightforward and has received consistent construction for many years, it has recently been re-examined in connection with broad cross-licensing agreements and foundry agreements within the semiconductor industry. The unique interaction between the patent exhaustion doctrine, cross-licensing agreements, and foundry agreements has required the courts to make a difficult choice between adhering strictly to precedent and opening the door to "sham" foundry agreements, or abrogating the doctrine. So far, the courts have chosen to adhere strictly to precedent. As a result, many companies may now be exposed to sham foundry agreements, which allow third-party manufacturers to infringe upon patents, with no recourse available to the patentee.

In Part I, this Note will briefly examine the history, goals, and scope of the patent monopoly. Part II will examine the patent exhaustion limitation on the patent monopoly. Parts III and IV will examine the development of broad cross-licensing agreements and foundry agreements within the semiconductor industry. Part V will examine the unique relationship between the patent exhaustion doctrine, cross-licensing agreements, and

4. See, e.g., Intel Corp., 995 F.2d at 1571 (Plager, J., dissenting).

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foundry agreements in light of recent case law. Part VI will examine the sham foundry problem resulting from this relationship. Finally, in Part VII, this Note will propose a solution to the courts and those corporations contemplating entering into patent licensing agreements.

I. HISTORY, GOALS, AND SCOPE OF THE PATENT MONOPOLY AND THE DOCTRINE OF PATENT EXHAUSTION

Article I, Section 8, Clause 8 of the United States Constitution (the Clause) provides Congress with the power to create protection for intellectual property rights. The Clause provides that Congress may "promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." The Supreme Court has stated that "[t]he economic philosophy behind the clause... is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare."

In addition to other intellectual property protection embodied in the Clause, the Clause guarantees inventors a limited monopoly in their invention by making the right exclusive. However, this monopoly is not self-executing and is not issued without a price. Congress, within constitutional limits, enacts statutes that set conditions and tests for patentability. The most recent congressional legislation requires that an invention be novel, useful, and nonobvious in order to receive the benefits of the patent monopoly.

6. Id.
8. See generally EARL W. KINTNER & JACK LAHR, AN INTELLECTUAL PROPERTY LAW PRIMER (2d ed. 1982). Note that the law of copyrights has a first-sale doctrine, which is very similar to the patent doctrine. Under the copyright doctrine, the first sale of a copyrighted object prevents the copyright owner from controlling future transfers. Bobbs-Merrill Co. v. Straus, 210 U.S. 339 (1908). However, unlike the doctrine of patent exhaustion, the copyright doctrine has been codified. See 17 U.S.C. § 109(a) (1988).
9. ROSENBERG, supra note 5, § 1.03, at 1-9.
Novelty is determined by examining the claimed invention in light of the "prior art." Prior art "is knowledge that is available, including what would be obvious from it, at a given time, to a person of ordinary skill in an art." Courts generally have held that to satisfy the novelty requirement the degree of difference between the claimed invention and the prior art need only be slight. Novelty will likely be found if the physical structure of the claimed invention is not identically disclosed by the prior art. If the claimed invention is disclosed by the prior art, it will be deemed "anticipated" and will not satisfy the novelty requirement.

The utility requirement is satisfied if a significant use for the claimed invention exists. The majority of American courts have defined utility as merely operative. Therefore, if the claimed invention is capable of some beneficial use, it will satisfy the test for utility.

Nonobviousness is determined by examining what would have been obvious to a person reasonably skilled in the applicable art at the time the claimed invention was made. If the claimed invention would have been obvious at the time of its creation, it is not patentable.

Although these statutory requirements are often difficult to overcome, the truly clever inventor can reap great rewards by fulfilling these requirements. The patent monopoly grants inventors the right to exclude everyone from making, using, or selling the patented invention without their permission. The benefit to the public in exchange for this grant of exclusivity is

(1966).
13. Id.
14. ROSENBERG, supra note 5, § 7.05, at 7-31.
15. Id.
16. Id. at 7-31 to -32.
17. Id. § 8.02, at 8-3 (citing Brenner v. Manson, 383 U.S. 519, 528-34 (1966); In re Joly, 376 F.2d 908, 911 (C.C.P.A. 1967); Ex Parte Krenzer, 199 U.S.P.Q. (BNA) 227, 228 (P.O. Bd. App. 1978)).
18. Id. at 8-4 to -5 (citing E.I. du Pont de Nemours & Co. v. Berkley & Co., 620 F.2d 1247, 1250 (9th Cir. 1980)).
19. Id.
20. ROSENBERG, supra note 5, § 9.02[2][a][iii], at 9-21 (citing 35 U.S.C. § 103 (1988)).
equally rewarding. By requiring extensive disclosure, the patent monopoly gives the public an immediate knowledge of the nature of the invention. Additionally, the limited length of the monopoly provides the public with an unrestricted right to use the invention after the patent has expired.

However, the monopoly is not without restrictions on the patent holder. The length of the patent is limited to a maximum of seventeen years. Also, other doctrines, such as patent exhaustion, may limit the scope of the patent monopoly with respect to certain individuals.

II. DOCTRINE OF PATENT EXHAUSTION

The Supreme Court first recognized the doctrine of patent exhaustion in Bloomer v. McQuewan. The Court, in comparing the various rights of the patentee with those of a purchaser, indicated that

[T]he purchaser of [a] machine for the purpose of using it in the ordinary pursuits of life, stands on different ground [than the franchisee who purchases the right to make or vend the machine]. In using it, [the purchaser who purchases the right to use alone] exercises no rights created by the act of Congress, nor does he derive title to it by virtue of the franchise or exclusive privilege granted to the patentee. The inventor might lawfully sell it to [the purchaser or user] if no other patentee stood in his way. And when the machine passes to the hands of the purchaser, it is no longer within

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24. Id.; see 35 U.S.C. § 112 (1988). Section 112 provides that:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.
Id. § 112 (1988).
25. Robinson, supra note 23, § 33; Rosenberg, supra note 5, § 1.02, at 1-6 to -7; see 35 U.S.C. § 154 (1988); see also infra note 26.
26. 35 U.S.C. § 154 (1988). The length of the monopoly is seventeen years for utility patents. Id. The length of the monopoly is fourteen years for design patents. Id. § 173 (1988); see also supra text accompanying note 21.
27. Bloomer v. McQuewan, 55 U.S. (14 How.) 539, 549 (1852) (holding that the patent monopoly was limited with respect to purchasers of the patented product).
28. Id. at 539.
the limits of the monopoly. It passes outside of it, and is no longer under the protection of the act of Congress. 29

The patent exhaustion limitation on the patent monopoly has been justified on a theory of licenses. 30 A patent is considered, like other property, to be a bundle of rights. 31 A patent holder may confer the right to manufacture, sell, or use the patented invention separately from the patentee's ownership interest in the patent itself. 32 The patentee may grant the rights subject to more specific limitations. 33 For example, the patentee may grant any or all of the rights limited to a radius of ten miles around a particular city. 34 However, because licenses are a matter of state contract law, to be enforceable, a grant that seeks to specifically limit the rights of the purchaser must be made expressly. 35 The scope of the license is determined from the circumstances surrounding its creation and the intention of the parties. 36 If the surrounding circumstances indicate an unconditional grant, then the implied license includes the unrestricted rights to use and sell the object embodying the patent. 37 That is,

by a sale of a patented article subject to no conditions the purchaser undeniably acquires the right to use the article for all the purposes of the patent so long as it endures. He may use it where, when, and how he pleases, and may dispose of the same unlimited right to another. 38

29. Id. at 539. Some authorities cite Adams v. Burke, 84 U.S. 453 (1873), as the Supreme Court's first articulation of the patent exhaustion doctrine. See, e.g., Abramson, supra note 5, at 3. However, Adams v. Burke apparently only refined the doctrine previously set forth in Bloomer. The Court stated in Adams v. Burke:

When the patentee . . . sells a machine or instrument whose sole value is in its use, he receives the consideration for its use and he parts with the right to restrict that use. The article, in the language of the Bloomer court, passes without the limit of the monopoly.


30. ROBINSON, supra note 23, § 824, at 617-19.
33. ROBINSON, supra note 23, §§ 810-814, at 589-96.
34. See id. at 591-92 & n.3; see also id. § 813.
35. Id. § 809, at 588.
38. Id. at 19.
The rationale underlying this treatment of patent licenses is that once the patentee has received consideration for releasing the article from the monopoly, he can no longer limit or charge for its use. However, the implied license gives the licensee no rights in the patent itself and no right to sue for infringement.

Although the doctrine appears to be straightforward, it has recently become complicated in conjunction with broad cross-licensing agreements and foundry agreements within the semiconductor industry.

III. PATENT CROSS-LICENSING: TROUBLE AHEAD

In the highly volatile and competitive semiconductor industry, manufacturers are constantly seeking new ways to improve productivity and reduce costs. One way semiconductor manufacturers have done this is by entering into broad cross-licensing agreements with their competitors.

A cross-license is an agreement between two parties in which one party agrees to license to another party one or more patents in exchange for licenses to use one or more patents owned by the other party. In the context of the semiconductor industry, cross-licenses have often been extremely broad. For instance, in Intel Corp. v. ULSI System Technology, Inc., Intel Corporation and Hewlett-Packard Corporation each granted to the other a "'world-wide, royalty-free license'" covering all patents and patent applications "having an effective filing date prior to January 1, 2000, said license to be effective until the expiration of said patents.'"
The breadth of these agreements may be very beneficial to both parties involved. It allows both companies, who presumably have extensive programs of research and development, to avoid the expense of litigation and instead focus their resources on product development. With the extremely high cost of patent litigation and the lure of access to new technology, cross-licensing agreements appear to be a wise choice. However, cross-licenses are not for everyone. A cross-license may require that both parties bring something to the bargaining table. Therefore, it is possible that small companies without a patent portfolio, or with one of a limited size or value, would lack bargaining strength and thus be hampered in any efforts to enter into such an agreement.

Although typically beneficial to both parties involved in the agreement, these broad licenses may also create hidden patent exhaustion problems. The conflict has arisen because the courts have not required a traditional sale to remove the patented product from the reach of the patentee's monopoly. Thus, it is not necessary, for purposes of exhaustion, that the manufacturer sells the product to the consumer. In fact, the Supreme Court has outlined a test that emphasizes substance over form in determining whether a sale has occurred. In United States v. Masonite Corp., the Court indicated that the form of the transaction does not govern. Instead, the Court stated it is necessary to determine "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.

47. Id. at 1571 (Plager, J., dissenting).
48. Chambers & Barr, supra note 42, at 16 (indicating, additionally, that patent litigation often ranges from $500,000 to $5,000,000).
49. Harshberger v. Tarrson, 87 F. Supp. 43, 45 (N.D. Ill. 1949) (holding that even though a product was transferred as the result of a security pledge, rather than a sale, it was still removed from the reach of the monopoly), aff'd, 184 F.2d 629 (7th Cir. 1950).
50. Id.
52. Id.
53. Id.
54. Id. (citing United States v. Univis Lens Co., 316 U.S. 241 (1942); Boston Store v. American Graphophone Co., 246 U.S. 8 (1918); Straus v. Victor Talking Mach. Co., 243 U.S. 490 (1917)). The test for exhaustion under the copyright doctrine is substantially similar to the patent test. Burke & Van Heusen, Inc. v. Arrow Drug, Inc., 233 F. Supp. 881, 884 (E.D. Pa. 1964) ("[T]he ultimate question under the 'first sale' doctrine is whether or not there has been such a disposition of the copyrighted article that it may fairly be said that the copyright proprietor has received his
United States v. Univis Lens Co., the Court rationalized that a licensee, by receipt of the purchase price, has received "every benefit of [the] monopoly which the patent law secures." Therefore, due to the consideration embodied in a licensing agreement, a sale of an article embodying the invention of the patent by an authorized licensee, acting within the scope of the license, will remove that product from the reach of the patentee's monopoly.

IV. FOUNDRY AGREEMENTS

In addition to broad cross-licensing agreements, the highly competitive nature of the semiconductor industry has forced many companies to enter into foundry agreements. Within the semiconductor industry, a foundry agreement is an arrangement by which one semiconductor company (the foundry), uses its own manufacturing facilities to make and sell a device to another semiconductor company that originally designed the device. For example, Company A might contract with Company B, the foundry, for Company B to manufacture computer chips. The chip designs are developed or owned by Company A. The designs are given to Company B, which then fabricates the chips, and returns the finished chips to Company A. Company A then resells the chips as its own.

There are primarily four reasons why companies enter into foundry agreements, all of which are economically motivated. First, and most importantly, the cost of building semiconductor fabrication facilities of their own may be cost-prohibitive for

reward for its use.

55. 316 U.S. 241 (1942).
56. Id. at 252.
57. Id. at 249-51; see also Unidisco, Inc. v. Schattner, 824 F.2d 965, 968 (Fed. Cir. 1987) (holding that by reason of the third-party's "authority to resell the product," derived from the licensee from whom it was purchased, any product sold by the third-party is beyond the reach of the patent).
60. See Cyrix Corp., 803 F. Supp. at 1204.
61. Id.
62. Id.
63. Id.
64. Worldwide, supra note 58.
small companies. Second, with the semiconductor industry becoming more and more volatile, a company may wish to acquire additional production facilities for a short time to meet increased demand. Third, the semiconductor industry is constantly diversifying into different technological processes. Therefore, if a company does not have the type of semiconductor fabrication process required in-house to meet demand, it may be forced to enter into an agreement with an outside foundry. Finally, to keep up with the pace of technological change, a company may be forced to shut down its existing facilities to upgrade. Again, the company would be forced to enter into an interim agreement with an outside foundry.

Because foundry agreements are economically based, they have become increasingly pervasive in a volatile industry such as the semiconductor industry. Due to their unique interrelationship with cross-licenses and the doctrine of patent exhaustion, the legal significance of foundry agreements cannot be overstated.

V. CROSS-LICENSES, FOUNDRY AGREEMENTS, AND PATENT EXHAUSTION: A POTENTIALLY DANGEROUS COMBINATION

Although cross-licenses, foundry agreements, and the patent exhaustion doctrine are very straightforward by themselves,

65. Id. (indicating that the cost to establish a production facility capable of 10,000 wafer starts per month will increase tenfold between 1992 and the year 2000, reaching $2 billion); see also Intel To Build US$1 Billion Wafer Fab Plant, INTEGRATED CIRCUITS INT'L, June 1993, available in LEXIS, News Library, ZWLD1 File [hereinafter Intel To Build]. Intel will build the most expensive foundry ever built in the United States. The facility will cost one billion dollars, be located in Rio Rancho, New Mexico, and be operational in 1995. Intel To Build, supra.

66. Worldwide, supra note 58.

67. Id.

68. Id.

69. Id.

combined they have recently produced a great deal of frustration in the federal courts. This frustration arises under consistently similar facts. Judge Plager, in his dissenting opinion in *Intel Corp. v. ULSI System Technology, Inc.*,\(^\text{71}\) summarized as follows:

Company A and Company B are major competitors. . . . A and B both maintain large [research] & [development] operations, and obtain patents on their various innovations. . . . [B]oth companies . . . agree that it is in their mutual interest to avoid spending resources litigating with each other over patent rights rather than inventing.

. . . [Therefore,] they cross-license each other in such a way that each is free to innovate and market their own [sic] similar products without fear of infringing upon the patent rights of the other. There is no intent to authorize third parties to make, have made, use, or sell the inventions covered by these patents. . . .\(^\text{72}\)

At this point, the facts produce no problems for the courts. Any dispute that arises would simply be a cross-license dispute and thus governed by state contract law.\(^\text{73}\) However, the frustration occurs when a third party enters the picture, as highlighted by Judge Plager’s example:

Company C, a small company seeking to break in to the same market [as A and B], approaches Company B with a proposition. C will provide B with details of its (C’s) invention (a design similar to that patented by A). C will provide complete . . . specifications, and warrants to B in writing that C rightfully obtained the design involved and that it does not infringe the patent rights of others. Using its manufacturing facilities, B is to manufacture the item to C’s specifications. B will provide the raw materials, and will be paid on a per completed unit basis. B . . . agrees, and . . . delivers the item to C . . .

Later, C markets its product . . . . A examines C’s product, concludes that it is so much like A’s product that it infringes one of A’s patents, and sues C. C then defends on the grounds that, since B manufactured the item that infringes A’s patent, and since B is immune from liability for infringement of A’s patents under the A-B cross-license, C

\(^{71}\) 995 F.2d 1566 (Fed. Cir. 1993).

\(^{72}\) Id. at 1571 (Plager, J., dissenting).

also is immune under the doctrine of... 'patent exhaustion.'

Therefore, courts have been forced to decide whether a sale has occurred, for purposes of the patent exhaustion doctrine, when a licensee manufactures and "sells" a product designed by a third party embodying the licensor's patents to that third party. Thus far, this decision has not been an easy one for the courts to make.

A. Intel Corp. v. United States International Trade Commission: Contract Interpretation Prevails

In Intel Corp. v. United States International Trade Commission (Atmel), Intel and Sanyo Electric Company (Sanyo) entered into a broad cross-licensing agreement. The agreement granted Sanyo a "non-exclusive, world-wide royalty-free license without the right to sublicense except to its [s]ubsidiaries, under Intel [p]atents which read on any Sanyo [devices] for the lives of such patents, to make, use and sell such products."

Subsequently, Sanyo manufactured Erasable Programmable Read-Only Memories (EPROMs) for Atmel Corporation (Atmel Corp.) to sell as its own product, which were designed by Atmel Corp. but embodied portions of Intel patents. Intel initiated patent infringement actions to enjoin production of the EPROMs.

Intel, among others, seeking to enjoin importation of the allegedly infringing EPROMs, filed a complaint with the United States International Trade Commission (Commission). Based

74. Intel Corp., 995 F.2d at 1571-72.
75. See, e.g., id. at 1569.
76. 946 F.2d 821, 825 (Fed. Cir. 1991).
77. Id. at 826 n.9 (emphasis omitted). In Judge Plager's previous example, Intel would be Company A and Sanyo would be Company B. See supra text accompanying notes 71-74.
78. Intel Corp., 946 F.2d at 825. "An EPROM is a monolithic integrated circuit containing thousands of metal oxide semiconductor (MOS) transistor cells on which encoded binary information can be stored." Id. at 824 n.2. Essentially, an EPROM is a computer chip most often characterized by its memory capacity. Id. at 824 n.4.
79. Id. at 826. In Judge Plager's example, Atmel Corp. would be Company C. See supra text accompanying notes 71-74.
80. 946 F.2d at 824.
81. Id. The Commission proceeded with an investigation under 19 U.S.C. § 1337, which "permits the Commission to exclude from the United States any goods that violate the provisions of that section." Id. Further, "[t]he Commission may also order
upon a report by the administrative law judge assigned to the case, the Commission entered an exclusion order preventing the importation of the EPROMs and ordered Atmel Corp. to cease and desist all activities in connection with the manufacture and sale of the EPROMs. Atmel Corp. appealed the decision of the Commission.

Atmel Corp.'s defense was based primarily on the doctrine of patent exhaustion. Atmel Corp. claimed that because the EPROMs were manufactured by a licensed foundry under the cross-licensing agreement between Sanyo and Intel, and then sold to Atmel Corp., the EPROMs were therefore removed from the reach of Intel's patent monopoly. The Court of Appeals for the Federal Circuit disagreed.

The court based its holding on general provisions of contract law instead of on a methodical application of the patent exhaustion doctrine. The court interpreted the language of Sanyo and Intel's cross-licensing agreement, as Intel contended, to mean that Intel licensed only Sanyo products. Because Sanyo manufactured Atmel-designed EPROMs for Atmel Corp., Atmel Corp. products were manufactured rather than Sanyo products and thus the EPROMs were beyond the scope of the Intel-Sanyo licensing agreement. Furthermore, the court reviewed Atmel Corp.'s argument in light of Sanyo and Intel's

any party violating 337 [sic] 'to cease and desist from engaging in the . . . acts involved.' " Id. (citing 19 U.S.C. § 1337(f)(1) (1988)).
82. Id. at 825.
83. Id.
84. See id. at 826.
85. Id.
86. Id. at 823.
87. Id. at 826. The contract between Intel and Sanyo provided that the "'agreement shall be governed by and subject to and construed according to the laws of the State of California.' " Id. "California law states that the interpretation of a contract is a question of law, to the extent that it is based on the language of the agreement." Id. (citing Clark v. Rancho Santa Fe Ass'n, 265 Cal. Rptr. 41, 47 (Ct. App. 1989)). California law also states that when interpreting a contract every term of the contract must be given purpose and meaning, if possible. Beck v. American Health Group Int'l, Inc., 260 Cal. Rptr. 237, 244 n.5 (Ct. App. 1989). Further, California law also states that in resolving what the contract means, the court must "ascertain and give effect to the intent of the parties at the time the contract was signed." Intel Corp., 946 F.2d at 826 (citing Moss Dev. Co. v. Geary, 115 Cal. Rptr. 736, 741 (Ct. App. 1974)).
89. Intel Corp., 946 F.2d at 826-28.
90. Id.
intention at the time the licensing agreement was made. The court held that Intel could not have possibly intended that any company in the world could get Sanyo to make its parts without having to get its own license from Intel. Absent any evidence to the contrary, the court would not give the contract such a strained interpretation.

The decision in *Atmel* is important because it signals the willingness of at least one court to rely on state contract law in lieu of the patent exhaustion doctrine. If the court in *Atmel* had chosen to uphold patent exhaustion, it could have easily decided that there had “been such a disposition of the article that it may fairly be said that [Intel] ha[d] received [its] reward for the use of the article.” Under the patent exhaustion doctrine, the consideration embodied in the licensing agreement between Sanyo and Intel could have been deemed Intel’s fair “reward” for the use of the EPROM patents, and thus those patents would have been removed from the reach of Intel’s monopoly. This result, however, would have allowed any company, which could not get or did not want to pay for a license from Intel, to “employ Sanyo as a foundry and circumvent Intel’s patents.”

The possibility of this type of sham foundry agreement appeared to be a major factor in determining the intent of the parties because there is no apparent reason Intel would have entered into such an agreement. Other courts, however, have been less concerned with the intent of the contracting parties and more concerned with a rote application of the patent exhaustion doctrine.

**B. Cyrix Corp. v. Intel Corp.: Patent Exhaustion Prevails**

In *Cyrix Corp. v. Intel Corp.*, the federal courts were faced with another of Intel’s broad cross-licensing agreements. This
agreement was made with the Mostek Corporation (Mostek). The terms of the agreement granted each party a license “to make, to have made, to use, to sell (either directly or indirectly), to lease and to otherwise dispose of Licensed Products.” "Licensed Products" were defined under the agreement as “any product[s] . . . manufactured, used or sold by either party covered by patents of the other party.” Mostek later assigned the license to SGS-Thomson.

SGS-Thomson entered into a foundry agreement with Cyrix Corporation (Cyrix) under which SGS-Thomson would manufacture Cyrix’s math coprocessors. Intel challenged the sale as violative of its patent rights and Cyrix defended on the grounds of patent exhaustion.

The United States District Court for the Eastern District of Texas followed a routine analysis of the patent exhaustion doctrine in reaching its conclusion that Intel’s rights were exhausted. The court appeared unconcerned about the intent of the contracting parties and the possibility of sham foundry agreements. In fact, the court cited Atmel, a factually similar case with a contrary holding, in support of its position without distinguishing it. Although, a third party designed the product, the court opined that this fact was irrelevant. However, whether the article was a physical embodiment of the patented invention was relevant. The court held that the math coprocessor was such a physical embodiment; therefore, because SGS-Thomson manufactured it as a licensed-foundry for Cyrix, it was beyond the reach of Intel’s patent monopoly.

99. Id. (quoting the agreement).
100. Id. Additionally, the agreement was for a term of ten years, which was later extended to twenty-two years. The agreement provided that the license was assignable without the consent of the other party. Id.
101. Id. Intel was barred from challenging the assignment by laches because it did not file a claim until five years after notice of the assignment. Id. at 1213.
102. Id. at 1205. “A math coprocessor is a device which is designed to operate in conjunction with a microprocessor and is capable of performing mathematical computations at speeds up to 100 times faster than the microprocessor alone.” Intel Corp. v. ULSI Sys. Tech., Inc., 995 F.2d 1566, 1567 n.2 (Fed. Cir. 1993).
104. See id. at 1213-15.
105. Id. at 1213-14.
106. Id. at 1214.
107. Id. (citing United States v. Univis Lens Co., 316 U.S. 241 (1942)).
108. Id. at 1215.
By reaching its conclusion solely upon the doctrine of patent exhaustion, the court ignored the intent of Intel and Mostek at the time the agreement was made. Once again, it is difficult to imagine that Intel would allow anyone to sell a product "embodying" its patents solely because it was manufactured by a licensee. However, regardless how ludicrous the result, the Federal Circuit Court of Appeals in Intel Corp. v. ULSI System Technology, Inc. used a similar analysis in reversing the finding of the district court.\textsuperscript{109}

C. Intel Corp. v. ULSI System Technology, Inc.: Clarity at Last?

In Intel Corp. v. ULSI System Technology, Inc., another of Intel's broad cross-licenses was at issue.\textsuperscript{110} This time, the cross-license was made with the Hewlett-Packard Corporation (HP).\textsuperscript{111} Under the license, Intel and HP each granted to the other, "an irrevocable, retroactive, nonexclusive, world-wide, royalty-free license under all patents and patent applications [controlled by the other party] having a [first] effective filing date prior to January 1, 2000, said license to be effective until the expiration of said patents."\textsuperscript{112} HP later entered into a foundry agreement to manufacture math coprocessors designed by ULSI System Technology, Inc. (ULSI) for sale as its own product.\textsuperscript{113} Intel later brought a patent infringement action against ULSI seeking a preliminary injunction enjoining ULSI from continued infringement.\textsuperscript{114} ULSI defended on the grounds of patent exhaustion because the coprocessors were manufactured

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\textsuperscript{109} Intel Corp. v. ULSI Sys. Tech., Inc., 995 F.2d 1566 (Fed. Cir. 1993).
\textsuperscript{110} Id.
\textsuperscript{111} Id. at 1567. In Judge Plager's example above, Intel would be Company A, Hewlett-Packard would be Company B, and ULSI would be Company C. See supra text accompanying notes 71-74.
\textsuperscript{112} Intel Corp., 995 F.2d at 1567 (quoting the agreement).
\textsuperscript{113} Id.
\textsuperscript{114} Intel Corp. v. ULSI Sys. Tech., Inc., 782 F. Supp. 1467 (D. Or. 1991). Intel also alleged unfair competition and false designation of origin under the Lanham-Trademark Act and unfair competition under the laws of the State of Oregon in connection with a demonstration diskette used by ULSI which indicated that ULSI's product was authorized by Intel. Id. at 1469. ULSI stipulated to the permanent injunction prohibiting further distribution of the diskette. Id. at 1470. In order to determine if a preliminary injunction could be granted under 35 U.S.C. § 283, the district court considered: (1) movant's likelihood of success on the merits; (2) threat of irreparable harm to Intel if injunctive relief is denied; (3) balance of hardship between parties; and (4) impact of injunction on public interest. Id. at 1470. After analyzing the above factors, the district court granted the injunction. Id. at 1470-76.
by HP as a licensed-foundry under a valid cross-license with Intel.\textsuperscript{115} However, the district court agreed with Intel and granted the injunction\textsuperscript{116} but was subsequently overruled by the Federal Circuit Court of Appeals.\textsuperscript{117}

1. The District Court's Opinion

The district court was concerned primarily with an interpretation of the breadth of the Intel-HP cross-licensing agreement rather than with a methodical application of the patent exhaustion doctrine.\textsuperscript{118} In support of their positions, both sides cited a paragraph in Atmel.\textsuperscript{119} The paragraph read:

If the Intel/Sanyo agreement permits Sanyo to act as a foundry for another company for products covered by the Intel patents, the purchaser of those licensed products from Sanyo would be free to use and/or resell the products. Such further use and sale is beyond the reach of the patent statutes.\textsuperscript{120}

ULSI contended that the paragraph completely disposed of Intel's argument concerning the license defense.\textsuperscript{121} ULSI claimed that because HP acted as a foundry for ULSI, the sale of the coprocessor was a sale under the patent law; therefore, Intel's rights concerning that chip were exhausted.\textsuperscript{122}

Intel, on the other hand, argued that what HP provided to ULSI were only manufacturing services.\textsuperscript{123} Therefore, Intel contended it would be impossible for the patent to be exhausted because there was no sale.\textsuperscript{124} Intel further argued that the paragraph from Atmel was merely dicta.\textsuperscript{125}

The court, without directly addressing Intel's or ULSI's arguments, looked at the intent of Intel and HP at the time the

\textsuperscript{115} Id. at 1474.
\textsuperscript{116} Id. at 1476.
\textsuperscript{117} 995 F.2d at 1571.
\textsuperscript{119} Intel Corp., 682 F. Supp. at 1474.
\textsuperscript{120} Id. (citing Intel Corp. v. United States Int'l Trade Comm'n, 946 F.2d 821, 826 (Fed. Cir. 1991)).
\textsuperscript{121} Id.
\textsuperscript{122} Id.
\textsuperscript{123} Id.
\textsuperscript{124} Id.
\textsuperscript{125} Id.
agreement was entered into. The court stated it was clear that neither Intel nor HP intended for the agreement to be so broad as to grant the other party the power to sublicense any patent granted under the agreement. The court did not explain, however, which party, if any, had contended the sale by HP to ULSI constituted a sublicense. Rather, the court concluded that a sublicense impermissible under the HP-Intel licensing agreement arose upon this sale. Therefore, the court granted the injunction in favor of Intel.

Although the court's analysis did not address all issues, it emphasized the importance of examining the intent of the contracting parties. However, the Federal Circuit Court, which heard ULSI's appeal, was unconcerned with the intent of the contracting parties and more concerned with a rigid application of the patent exhaustion doctrine.

2. The Circuit Court's Decision

The circuit court, framing the issue in a slightly different manner, focused upon the nature of the sale from HP to ULSI rather than the intent of the contracting parties. If HP made a "sale" to ULSI, Intel's rights would be extinguished. If not, ULSI would be infringing on Intel's patents. The court concluded that there had been a sale and that Intel's rights had been extinguished.

In reaching its conclusion, the court rejected a number of arguments by Intel to the contrary. First, Intel argued that the patent exhaustion doctrine did not apply because HP never sold a product to ULSI. Intel claimed that what was actually sold by HP under its foundry agreement with ULSI were "fabrication services with an ancillary sale of wafers and chemicals.

126. Id. at 1474-75.
127. Id.
128. See id.
129. Id. at 1474-75. But see Lisle Corp. v. Edwards, 777 F.2d 693 (Fed. Cir. 1985) (holding that resale by a licensee does not create a sublicense); see also Intel Corp. v. ULSI Sys. Tech., Inc., 995 F.2d 1566 (Fed. Cir. 1993) (using Lisle to overturn the district court's decision).
131. Intel Corp., 995 F.2d 1566.
132. See id. at 1569.
133. Id. at 1569-71.
134. Id. at 1569.
135. Id. (emphasis omitted).
Intel claimed that HP could not have sold a product covered by the patent because HP never had any ownership rights in ULSI’s coprocessors.\textsuperscript{136} Therefore, Intel claimed that no sale ever took place for purposes of the patent exhaustion doctrine.\textsuperscript{137} The court disagreed.

In rejecting Intel’s first argument, the court examined the contract between HP and ULSI.\textsuperscript{138} The contract included references to the sale of semiconductor wafers that incorporated ULSI’s design, prices for the chips, and delivery schedules for shipment of the chips to ULSI.\textsuperscript{139} Therefore, the court concluded that more than manufacturing services were sold and Intel’s argument was without merit.\textsuperscript{140} Judge Plager, dissenting, had a different view of the contract.\textsuperscript{141} He stated that the “overall context of the contract demonstrate[d] that the sale was of services, measured per chip, rather than [the] sale of any technology.”\textsuperscript{142}

Second, Intel contended that in order for a sale to occur, the licensed seller of the patented product must own intellectual property rights in the product.\textsuperscript{143} Therefore, a sale could not have occurred because HP owned none of the intellectual property rights in ULSI’s coprocessors.\textsuperscript{144}

The court rejected this argument, stating that ownership of intellectual property rights had no bearing on the controlling issue: whether a sale occurred when HP sold coprocessors to ULSI.\textsuperscript{145} The court said that “[t]o the extent that Intel had a patent covering the chips, HP’s conceded right to sell the chips deprives Intel of any claim of infringement, as long as HP sold the chips.”\textsuperscript{146} However, it appears the court was just restating the issue. Judge Plager, once again, disagreed with the majority. He stated that a licensee must have intellectual property

\textsuperscript{136} Id.
\textsuperscript{137} Id.
\textsuperscript{138} Id.
\textsuperscript{139} Id.
\textsuperscript{140} Id.
\textsuperscript{141} Id. at 1571 (Plager, J., dissenting).
\textsuperscript{142} Id. at 1575-76 (emphasis omitted).
\textsuperscript{143} Id. at 1569.
\textsuperscript{144} See id.
\textsuperscript{145} Id.
\textsuperscript{146} Id.
ownership rights in the property for a sale to occur. In other words, how can you sell something that you do not own?

The court, possibly concerned about Intel's attempt to recover from both HP and ULSI, further admonished Intel for its decision to file suit. The court stated that

[w]hile Intel may not in retrospect be pleased with the deal that it made permitting HP to make unrestricted sales, it nevertheless granted HP that right in 1983, presumably for consideration it believed to be of value at that time. It cannot now renege on that grant to avoid its consequences.

However, the majority did not consider that Intel did not intend, by contracting with HP, for such an absurd result to ensue. Judge Plager pointed out that the court had ignored the factual findings of the trial court, which concluded that there was no intent for such a result. Judge Plager stated that

[It is correct that an appellate court approaches contract interpretation as a question of law. We thus owe no special deference to the trial court's view of that law; that is the meaning of review de novo. But that is not the same as saying we are free to ignore the trial court's factual determinations regarding the intent of the parties, based on testimony at trial.]

Third, Intel claimed that the sale of chips by HP to ULSI constituted a "de facto sublicense" that would be prohibited by the licensing agreement. The court rejected this argument, holding that "[t]he agreement between HP and ULSI was not a sublicense, but a contract for the manufacture and sale of chips." In reaching its conclusion, the court analogized the facts in ULSI to those in Lisle Corp. v. Edwards.

In Lisle, a licensee sold products covered by the licensor's patent to a third party that resold the products under its own
trademark. The licensor brought an infringement action claiming that the manufacture of the product for the third party was a sublicense, which was prohibited under the licensing agreement. The court held that resale by the third party did not create a sublicense. Similarly, the court in ULSI held that the sale by ULSI did not create a sublicense because HP did not empower ULSI to make Intel-patented chips. Once again, Judge Plager disagreed with the majority, distinguishing Lisle. He argued:

In Lisle, the substance of the transaction was the licensee ... manufacturing a product containing the patented invention, with a subsequent authorized sale of the product to a third party ... interested in buying it. Here, in contrast to Lisle, the third party, ULSI, purported to have no interest in buying the patentee's invention—the substance of the transaction was the licensee making the third party's invention for the third party's account.

Additionally, the circuit court went on to distinguish Atmel, which was cited by both Intel and ULSI as supporting authority. The court found that the agreement in Atmel was distinguishable because it contained a limitation. Sanyo was precluded from serving as a foundry for non-Sanyo products because Sanyo could only sell Sanyo products. In contrast, the court stated that the agreement between HP and Intel contained no restrictions on HP's right to sell or serve as a foundry. Once again, this interpretation flies in the face of contract interpretation principles. One of the main factors considered by the Atmel court was the intent of the parties, stating "[w]ithout something to explain why the parties would

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156. Lisle Corp., 777 F.2d at 695.  
157. Id.  
158. Id.  
160. Id. at 1574.  
161. Id. (emphasis added).  
162. Id. at 1570.  
163. Id.  
164. Id.  
165. Id.  
166. See generally CORBIN ON CONTRACTS § 536 (West Supp. 1989) (explaining that courts should examine evidence of the circumstances surrounding contract formation and the context in which the contract is made in order to properly interpret the contract).
VI. THE BOTTOM LINE

In light of the preceding discussion, it remains unclear what arguments will and will not persuade the federal courts concerning patent exhaustion when the licensed foundry defense is raised. However, what remains clear is the real threat of sham foundry agreements. For instance, the Intel-HP agreement was entered into in 1983. Since that time, Intel’s semiconductor products have become extremely successful, annually surpassing one billion dollars in sales profit. For instance, if a company wishes to break into the personal computer market, it can simply approach one of Intel’s long-time licensees and have the licensee act as a foundry for the Intel-compatible microprocessors that the company developed. Of course, this company will tell the licensee that the microprocessor does not infringe on any Intel patents whatsoever. However, in reality, this will be far from the truth. This company will then sell the chip, depriving Intel of millions of dollars a year in revenue.

Although this hypothetical may be oversimplified and may include a degree of naivete on the part of the licensee, it does underscore the harsh reality of the ULSI and Cyrix decisions. Judge Plager said decisions such as these turn a “socially desirable agreement . . . into an unintended gift to all manner of infringers” thereby creating “a disincentive among competitors to invent rather than litigate, potentially disadvantaging companies in a volatile industry such as this in competing world-wide.”

VII. SUGGESTIONS FOR THE FUTURE

What can a company do to protect itself from these types of sham foundry agreements? For those companies that entered into

168. Intel: Billion Dollar Half, COMPUTERGRAM INT'L, July 13, 1993, available in LEXIS, News Library, ZWLD1 File. Intel Corp. announced that it had, for the first time, exceeded one billion dollars in profit for a six-month period. Intel also "announced that it exceeded its goal of shipping 10,000 Pentium processors," Intel's newest microprocessor, in the second quarter of 1993. Id.
extremely broad licensing agreements previously, there appears
to be little hope short of renegotiating the contract. Renegotiating
may be possible, however, because each party to the contract may
be disadvantaged if the other party enters into a foundry
agreement with a third party.

For those companies that are contemplating such agreements,
the courts have offered a glimmer of hope.\textsuperscript{170} The best means
of protection is to expressly limit the powers of the licensee when
entering into any licensing agreement. For example, the
limitation in \textit{Atmel} was read to preclude Sanyo from
manufacturing anything but Sanyo products. Further, the court
in \textit{ULSI} stated in dicta that "if the [Intel] license had been
limited in some relevant way, that would be a different case from
the one before us. Intel might thereby have retained its right to
proceed against those who entered into foundry agreements such
as the present one."\textsuperscript{171} Therefore, the best protection is limiting
the license.

\textbf{CONCLUSION}

The doctrine of patent exhaustion has been in existence for
almost 150 years. During the greater portion of that time period,
the doctrine experienced relatively few challenges and was
applied with even-handed uniformity. Recent technological
advances have touched the doctrine much in the way that they
have touched other parts of society. Due to a peculiarity in
modern licensing and manufacturing agreements, application of
the patent exhaustion doctrine in a particular situation no longer
seems just. Many courts have evolved, like technology, and
considered the intent of the parties in determining whether the
patentee's rights should be exhausted. These courts have
consistently concluded that a party would not intend to open the
contents of its patent portfolios to any company that comes along.
However, this evolution has not yet reached every court. Other

\textsuperscript{170} In the copyright context, Congress has shown a willingness to make an
exception to the first-sale doctrine. See 17 U.S.C. \S 109(b) (1988). The Record Rental
Amendment of 1984, in order to combat the increasing number of record rental stores
in the United States, prohibited "the owner of a . . . phonorecord . . . for purposes of . . . commercial advantage" from "rent[ing], lease[ing], or lending" the phonorecord.
FOR THE NINETIES} 511 (3d ed. 1989).

\textsuperscript{171} Intel Corp., 995 F.2d at 1569.
courts have instead relied on a methodical application of the patent exhaustion doctrine. This application has resulted in much frustration and lost profits by certain parties to broad cross-licensing agreements, most notably, at least in terms of recent litigation, Intel Corporation.

To solve the problem, the federal courts should create a limited exception to the patent exhaustion doctrine. In cases in which the licensed-foundry defense is raised, the courts should be primarily concerned with the intent of the parties to the cross-license. This exception would operate similar to the opinion in Atmel and the position described by Judge Plager's dissent in ULSI: When the licensed-foundry defense is raised, the courts should be more concerned with the intent of the parties and less concerned with a rigid application of the patent exhaustion doctrine.

Leonard J. Hope