Indiana Law Review

Volume 28 1995 Number 3

NOTES

LEGALIZING PATENT INFRINGEMENT: APPLICATION OF THE PATENT EXHAUSTION DOCTRINE TO FOUNDRY AGREEMENTS

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INTRODUCTION

The United States Court of Appeals for the Federal Circuit recently decided the case of *Intel Corp. v. ULSI Systems Technology, Inc.*,[1] which addressed the patent exhaustion doctrine in the context of a patent cross-licensing agreement. The patent exhaustion doctrine provides that an authorized sale of a patented product places that product beyond the reach of the patent.[2] Patent cross-licensing agreements are intended to allow the parties to the agreement to concentrate on developing products rather than litigating patent rights. These agreements create an environment for producing new and useful inventions and help companies to compete in an increasingly aggressive world-wide marketplace.

In *ULSI*, Intel and Hewlett-Packard (HP) entered into a cross-licensing agreement in which they granted to each other all rights "under all patents and patent applications having an effective filing date prior to January 1, 2000."[3] ULSI, a design firm with little or no manufacturing capacity, designed a product which infringed an Intel patent. Under patent law, ULSI could not make, use or sell its newly designed product.[4] However, ULSI entered into a foundry agreement with HP whereby HP manufactured ULSI's infringing product. Intel filed a patent infringement suit against ULSI alleging that ULSI's product infringed its patent. The United States District Court for the District of Oregon, granted Intel a preliminary injunction.[5]

ULSI argued that the Intel-HP cross-license agreement permitted it to act as a foundry to manufacture the ULSI designed product and that, under the patent exhaustion doctrine, HP's shipment of the product was a "first sale" that extinguished Intel's patent rights with respect to those products. In essence, ULSI claimed that due to the patent exhaustion doctrine HP's license with Intel sanitized its infringing product.

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1. 995 F.2d 1566 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 923 (1994).

2. *See* Hobbie v. Jenson, 149 U.S. 355 (1893); Adams v. Burke, 84 U.S. (17 Wall.) 453 (1873); Bloomer v. McQuewan, 55 U.S. (14 How.) 539 (1982).

3. *ULSI*, 955 F.2d at 1567.

4. 35 U.S.C. § 271(a) (1988) ("[W]hoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent.").

5. Intel Corp. v. ULSI Sys. Technology, Inc., 782 F.Supp 1467 (D. Or. 1991), *rev'd*, 995 F.2d 1566, *cert. denied*, 114 S. Ct. 923 (1994).

The Court of Appeals for the Federal Circuit agreed with ULSI in a 2-1 decision.[6] However, the majority opinion puts into question how existing cross-licensing agreements will be interpreted. In his dissent, Judge Plager stated, "ULSI has managed to take a shield the law provides to purchasers of products containing patented inventions and turn it into a sword to cut off legitimate rights of the patent owner."[7]

This Note examines *ULSI's* implications on patent procurement and the use of patent cross-licensing agreements. Further, this Note discusses the evolution of the patent exhaustion doctrine and analyzes its application to cases such as *ULSI* involving unlicensed third parties sanitizing infringing products through foundry agreements. Finally, this Note suggests guidelines for courts to follow when presented with an unlicensed third party sanitizing products through a licensed foundry. This Note concludes that, as a matter of policy, *ULSI* was decided incorrectly and, therefore, should be strictly limited to its facts or, preferably, overruled.

I. THE PATENT SYSTEM

A. Policy Foundations

The framers of the Constitution established the patent system in August 1787 at the Constitutional Convention: "The Congress shall have power . . . to 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."[8] Congress implemented the Framers' stated purpose by providing that a utility patent shall grant the patentee the right to exclude others from making, using or selling the invention for a term of seventeen years.[9]

Both the inventor and the public benefit from the procurement of patents. The inventor benefits by receiving a seventeen-year right to prevent others from making, using or selling his invention.[10] The public benefits by obtaining a detailed disclosure of the invention from the inventor in the form of a written description that enables any "person skilled in the art . . . to make and use" the invention and that sets forth the "best mode" of carrying out the invention known to the inventor at the time the patent application is filed.[11]

The patent system also provides a series of practical economic benefits.

> [The] patent system . . . continu[es] to provide an incentive to research, development, and innovation . . . [that has] no practical substitute for the unique services it renders. First, a patent system provides an incentive to invent by offering the possibility of reward to the inventor and to those who support him. This prospect encourages the expenditure of time and private risk capital in research and development efforts. Second, . . . a patent system stimulates the

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6. *ULSI*, 995 F.2d at 1571.
7. *Id.*
8. U.S. CONST. art. I, § 8, cl. 8.
9. 35 U.S.C. § 154 (1988).
10. *Id.*
11. 35 U.S.C. § 112 (1988).

> investment of additional capital needed for further development and marketing of the invention [by assuring that the patent owner will have the exclusive right to the invention for seventeen years]. Third, by affording protection, a patent system encourages early public disclosure of technological information, some of which might otherwise be kept secret. Early disclosure reduces the likelihood of duplication of effort by others and provides a basis for further advances in the technology involved.[12]

The success of the patent system is the result of granting inventors the right to exclude others from making, using and selling their inventions for seventeen years.[13] Therefore, courts should be careful about creating precedent which limits a patent owner's right to exclude because it may serve as a disincentive to patent procurement.[14]

B. The Right To Exclude Others and The Problem Of Improvement Patents

The right that a patent gives the patent owner is described as a negative right because it permits the patent owner to prevent others from making, using or selling the invention, but it does not give the patent owner the right to make, use or sell the invention.[15]

A patent is infringed only if "every [element or] limitation set forth in a [patent] claim[16] [is] found in an accused product or process exactly or by a substantial equivalent."[17] It is possible to obtain a patent on a product even though that product infringes a prior patent. This type of patent is usually an improvement over the prior patent.[18] A patent claim in the improvement patent typically includes all the limitations or elements set forth in the prior patent and additional limitations (directed to the

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12. The Report Of The President's Commission on the Patent System, November 17, 1966, *reprinted in*, ROBERT A. CHOATE ET AL., PATENT LAW: TRADE SECRETS – COPYRIGHTS – TRADEMARKS 79 (2d ed. 1981). The President's Commission on the Patent System was established in April, 1965 by President Lyndon B. Johnson.

13. In Grant v. Raymond, 31 U.S. 218 (1832), Chief Justice Marshall stated that:

> [T]he settled purpose of the United States has ever been, and continues to be, to confer on the authors of useful inventions an exclusive right to their inventions for the time mentioned in the patent. It is the reward stipulated for the advantages derived by the public for the exertions of the individual, and is intended as a stimulus to those exertions.

Id. at 241-42.

14. *See* Graham v. John Deere Co., 383 U.S. 1, 6 (1966) ("It is the duty of the Commissioner of Patents and of the courts in the administration of the patent system to give effect to the constitutional standard by appropriate application, in each case, of the statutory scheme of the Congress.").

15. *See* Animal Legal Defense Fund v. Quigg, 932 F.2d 920, 935 n.15 (Fed. Cir. 1991) ("A patent provides only a right to exclude others from practicing the invention for a limited time.").

16. A "claim" is a portion of the patent which "point[s] out and distinctly claims[s] the subject matter which the applicant regards as his invention." 35 U.S.C. § 112 (1988).

17. Robert L. Harmon, *Seven New Rules of Thumb: How The Federal Circuit Has Changed The Way Patent Lawyers Advise Clients*, 14 GEO. MASON U. L. REV. 573, 576 (1992) (citing Johnston v. IVAC Corp., 885 F.2d 1574, 1577 (Fed. Cir. 1989)).

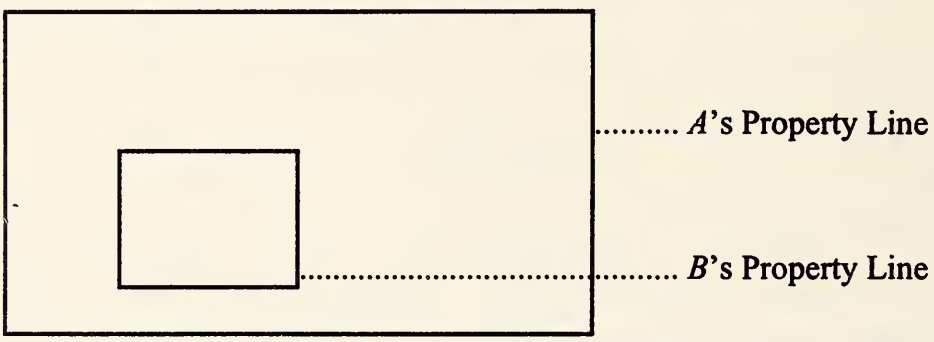
18. To be patentable, an invention must be: (1) novel, (2) nonobvious and (3) useful. 35 U.S.C. §§ 101-103 (1988).

improvement) that make the improvement patent claim patentable. Even though the improvement is patentable, the improvement patent owner would infringe the prior patent by making, using or selling his new invention.[19]

Where a patent improves upon a prior patent, the Supreme Court observed in *Cantrell v. Wallick*[20] that "[t]wo patents may both be valid when the second is an improvement on the first, in which event, if the second includes the first, neither of the two patentees can lawfully use the invention of the other without the other's consent."[21] Thus, the patent owner of the improvement has developed an invention that he cannot make, use or sell unless he obtains a license to make, use or sell the invention covered in the prior patent.[22]

The patent law right to exclude others from making, using or selling is analogous to trespass in real property law.

FIGURE 1



In Figure 1, patent owner *A* obtained a "broad" patent as denoted by his analogous real property lines.[23] Patent owner B obtained a "narrower" patent that was an improvement over *A*'s patent.[24] *B*'s analogous "narrower" real property lines are surrounded by *A*'s analogous "broader" real property lines.

In the patent law context, *B*'s "narrower" invention infringes *A*'s "broader" patent. In the analogous real property context, *B* cannot reach his property without trespassing on *A*'s property. In the patent law context, *A* can make, use or sell everything covered by the "broad" patent except *B*'s "narrower" improvement patent. To do so would infringe *B*'s patent. In the real property context, *A* can travel across all the property within *A*'s real property lines except the area within *B*'s real property lines. To do so would be trespassing on *B*'s land.

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19. Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.P.A., 944 F.2d 870, 879 n.4 (Fed. Cir. 1991) ("[T]he existence of one's own patent does not constitute a defense to infringement of someone else's patent. It is elementary that a patent grants only the right *to exclude others* and confers no right on its holder to make, use, or sell." (emphasis in original)). *See* text accompanying *supra* note 15.

20. 117 U.S. 689 (1886).

21. *Id.* at 694.

22. Milliken Research Corp. v. Dan River, Inc., 739 F.2d 587, 594 (Fed. Cir. 1984) ("[A] product may infringe more than one patent and . . . one may not be able to practice the invention protected by a patent directed to an improvement of another's patented article or method except with a license under the latter.").

23. *See supra* text accompanying note 15.

24. *See supra* text accompanying note 15.

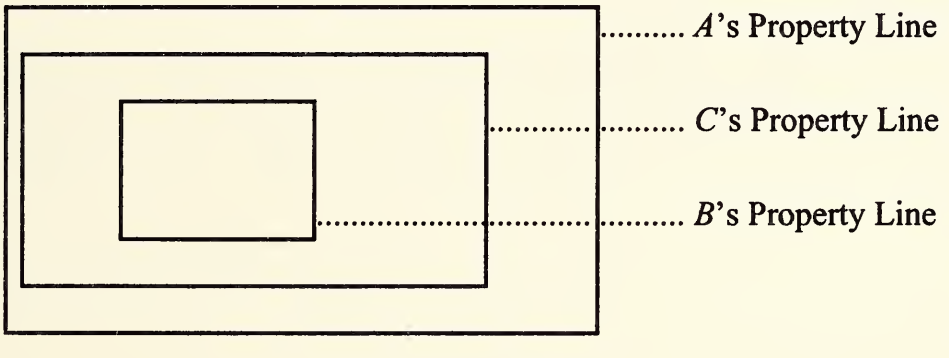
C. Patent Licensing Agreements

The above-described situation occurs frequently today as companies continuously improve each other's existing patented technology. To resolve the dilemma, companies often enter into licensing and cross-licensing agreements.[25]

A patent license is a promise by a licensor/patent owner not to sue the licensee for making, using or selling the invention.[26] Although a license does not affirmatively grant the right to *B* to make, use, and sell *A*'s invention, it is a promise by *A* that he will not sue *B* for patent infringement if *B* makes, uses or sells *A*'s invention.[27] Anyone who makes, uses or sells the product without a license is liable to the patent owner or his assigns for infringement.[28]

Continuing the example from Figure 1, if *A*'s invention were licensed to *B*, then *B* could make, use or sell anything within *A*'s analogous property lines, including *B*'s invention, without fear of a patent infringement suit from *A*.[29] In this situation, however, *A* may not make, use or sell *B*'s invention because *B* has not given *A* permission to do so.[30] If the consideration *A* receives for his license to *B* is the right to make, use or sell *B*'s invention, then a cross-license is formed. A patent cross-licensing agreement is simply an exchange of licenses by two or more patent owners.[31] Under the cross-license, *A* and *B* can both make, use or sell anything within *A*'s analogous property lines without fear of suit from each other.

FIGURE 2



25. *See supra* note 22.

26. ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT 210-211 (2d ed. 1991) (citing Fromson v. Western Litho Plate & Supply Co., 853 F.2d 1568 (Fed. Cir. 1988), and Spindelfabrik S.-S. & G. v. Schubert & Salzer Mas. Ak., 829 F.2d 1075 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1063 (1988)).

27. *Id.*

28. *See* Western Elec. Co. v. Pacent Reproducer Corp., 42 F.2d 116 (2d Cir. 1930), *cert. denied*, 282 U.S. 873 (1930) (The court held that a license to practice a patent merely protects a licensee from a claim of infringement by the owner of the patent; it does not grant him an interest in the patent.); 35 U.S.C. § 271(a) (1988) ("Except as otherwise provided in this title, whoever *without authority* makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent." (emphasis added)).

29. *See supra* note 26 and accompanying text.

30. *See supra* note 28 and accompanying text.

31. BLACK'S LAW DICTIONARY 376 (6th ed. 1990).

Figure 2 adds patent owner *C* to the situation described in Figure 1. Patent owner *C* obtained a patent as denoted by *C*'s analogous property lines. If *A* and *B* enter into a cross-license, *A* or *B* could still be sued by *C* for patent infringement if they make, use or sell *C*'s patented invention.[32]

D. Intellectual Property in the Business Setting & Cross-Licensing

Intellectual property is a valuable corporate asset that is the foundation for the success of many companies. This success is based on a product or service that is protected by a patent, copyright or trademark. Therefore, the existence and worth of most high technology business entities are based, in large part, on the quality and quantity of intellectual property they own.[33] For this reason, business entities have been taking a more aggressive approach to building patent portfolios.[34] A strong patent portfolio allows a company to build a strong product and service base, to license its technology for royalty revenues, and to establish cross-license agreements with other companies.

Companies enter into patent cross-licensing agreements to expand the scope of technology they may use in their products or services. As discussed above, a company may obtain a patent for an improvement of a prior patent but be unable to make, use or sell the invention because the company does not own the rights to the prior patent.[35] Generally, each company in a patent cross-licensing agreement grants the other company the rights to its patents for a specified term. Therefore, a cross-licensing agreement removes the concern a company has of infringing the patent rights of the other companies to the agreement.[36]

Because cross-license agreements alleviate the concern of patent litigation, many companies are taking advantage of the opportunity they present to direct resources toward research and development rather than litigation of patent rights.[37] Patent cross-licensing agreements are regularly used in many technology fields including computers,[38]

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32. In the analogous property context, *B* would have to trespass on *C*'s property to reach *B*'s own property.

33. John A. Copeland, *Patents Can Play A Vital Role In Supporting High-Tech Firms*, ATLANTA J. AND CONST., Oct. 31, 1993, at 3 ("Any company that uses technology developed in the last 20 years has got to pay careful attention to intellectual property.").

34. Daniel F. Perez, *Exploitation and Enforcement of Intellectual Property Rights*, THE COMPUTER LAWYER, Aug. 1993, at 10 ("In recent years, the assessment, procurement, and protection of intellectual property rights have become a priority for management willing to confront the realities of competition.").

35. *See supra* note 22 and accompanying text.

36. Richard Raysman & Peter Brown, *Strategic Alliances*, N.Y.L.J., June 8, 1993, at 3 ("Perhaps the most efficient method of preventing disputes regarding the ownership and exploitation of intellectual property assets is for the parties to cross-license their technology.").

37. *See* Gregory Quick, *Hard-Drive Companies Cross-License To Avoid Crossing Paths In Court*, COMPUTER RESELLER NEWS, Aug. 30, 1993, at 151 ("As the disk-drive arena remains highly competitive, cross licensing will reduce the chances of patent claims and litigation, while providing a strong foundation for design freedom within the industry.").

38. *See Business News—Business Bits*, DEFENSE ELECTRONICS, Nov. 1993, at 16 ("SI Diamond Technology Inc. and Microelectronics and Computer Technology Corp. have agreed to cross license technologies to form flat panel displays."); *But Suit Against Conner Shows It's Litigious As Ever. . .*,

biotechnology,[39] telecommunications,[40] medicine[41] and voice processing.[42] Society and the courts should encourage the use of cross-license agreements because they promote "science and the useful arts" rather than litigation of patent rights.[43]

E. The Patent Exhaustion Doctrine

Three limitations are recognized on the patent owner's ability to exclude others from making, using or selling his patented invention: (1) experimental or other nonprofit use by an accused infringer, (2) repair but not reconstruction of the patented invention by an accused infringer, and (3) the patent exhaustion doctrine, which relates to use or resale by an accused infringer after an authorized first sale.[44] This Note explores the third type of limitation.

Under the patent exhaustion doctrine, an authorized sale of a patented product places that patented product beyond the reach of the patent.[45] The patent owner's rights with respect to the product end with the sale, and a purchaser of such a product may use or resell the product free of the patent.[46]

COMPUTERGRAM INT'L, Aug. 13, 1993 (IBM brought suit against Conner Peripherals Inc. for infringing nine IBM patents. "[P]rior to the filing, the two had made extensive efforts to reach a patent cross-license agreement covering their entire disk drive patent portfolios but couldn't reach agreement."); *IDT Reports Record Revenues and Record Bookings for the Third Quarter of Fiscal 1993*, BUS. WIRE, Jan. 21, 1993 (Integrated Device Technology Inc. and Texas Instruments reached an agreement to "dismiss the patent litigation and . . . entered into a patent cross-license agreement and technology partnership."); *Sanyo, TI Ink Patent License Agreement*, ELECTRONIC NEWS, Nov. 30, 1992 at 20; *Seagate, Quantum Ink Cross-License*, ELECTRONIC NEWS, July 20, 1992 at 25 ("Saying it would rather cooperate with a competitor than pay a lawyer, Seagate Technology last week entered a cross-licensing agreement with Quantum giving the companies rights to use each other's patented technologies . . . . Every day in the newspaper you see another patent litigation has begun, and what's happening is it's the lawyers who are getting paid . . . .").

39. *See Chiron and Ortho Diagnostics Systems Sign HIV and HCV Agreements with Pasteur Sanofi Diagnostics and Genetic Systems*, BUS. WIRE, Nov. 8, 1993 ("This agreement establishes a strong proprietary position for the three businesses in the HIV Immunodiagnostics field."); *Mycogen and Ciba Seeds Sign Licensing Agreement*, BIOTECH BUS., Sept., 1993; *Ventritex Announces Cross-license Agreements*, BUS. WIRE, July 27, 1993 ("These two important cross-license agreements eliminate certain threatened and pending patent litigation as well as provide us with expanded design freedom for future products."); *Grace and Du Pont Cross-license Genetic Engineering Technologies*, INDUS. BIOPROCESSING TECH., May, 1992 at 3.

40. *See Ericsson and Motorola Conclude Compatibility Testing of Telecommunications Equipment*, BUS. WIRE, July 28, 1993.

41. *See Schering Berline Announces Cross-license Agreement With Mallinckrodt Medical for MRI Patents*, BUS. WIRE, Nov. 19, 1993.

42. *See Boston Technology Announces Licensing Agreement with Theis Research, Inc.*, PR NEWSWIRE, Jan. 4, 1993.

43. *See supra* note 8 and accompanying text.

44. 4 DONALD S. CHISUM, A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT §16.03 (1993).

45. Hobbie v. Jenson, 149 U.S. 355 (1893); Adams v. Burke, 84 U.S. (17 Wall.) 453 (1873); Bloomer v. McQuewan, 55 U.S. (14 How.) 539 (1852).

46. United States v. Univis Lens Co., 316 U.S. 241, 250-52 (1942).

In 1873, the Supreme Court stated in *Adams v. Burke*:[47]

> [W]hen the patentee, or the person having his rights, 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 court, passes without the limit of the monopoly. That is to say, the patentee or his assignee having in the act of sale received all the royalty or consideration which he claims for the use of his invention in that particular machine or instrument, it is open to the use of the purchaser without further restriction on account of the monopoly of the patentees.[48]

In *Keeler v. Standard Folding-Bed Co.*,[49] the Supreme Court expanded the *Adams* doctrine by holding that the purchaser of the patented product could resell as well as use the product free of the patent monopoly.

The authorized first sale of a patented product creates an implied license between the patent owner and buyer. Just as a license is an affirmative defense to a claim of infringement, the patent exhaustion doctrine is a defense to a claim of patent infringement in that implied license rights arise by operation of law.[50] For example, *A* buys a patented watch in an authorized first sale. If *A* uses the watch, the patent owner cannot sue *A* for patent infringement because of the implied license granted to *A* through the patent exhaustion doctrine. If *A* later sells the watch, causing the patent owner to accuse *A* of patent infringement, then *A* may once again use the patent exhaustion doctrine because there was an authorized "first sale" from the patent owner to *A*.

In 1942, the Supreme Court in *United States v. Univis Lens Co.*,[51] applied the patent exhaustion doctrine to parties acting under license agreements. In that case, Univis Corporation licensed Univis Lens Company to manufacture lens blanks and to sell the lens blanks to designated wholesaler licensees of Univis Corporation upon payment of fifty cents per pair of lens blanks by the Lens Company to Univis Corporation. Univis Corporation licensed wholesalers to authorize their purchase of the lens blanks from the Lens Company, to finish the lens blanks by grinding and polishing, and to sell them to prescription retailer licensees only at prices fixed by Univis Corporation. Univis Corporation also licensed the retailer licensees to purchase the blanks and sell them to their customers at prices prescribed by Univis Corporation. All the licenses to the wholesalers and retailers recited Univis Corporation's ownership of the lens patent and conferred to the licensees only the rights stated. The only consideration received by Univis Corporation through the whole licensing process was the fifty cents per pair of lens blanks received from the Lens Company.[52]

The Court stated that "[t]he first vending of any article manufactured under a patent puts the article beyond the reach of the monopoly which the patent confers."[53] The patent

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47. 84 U.S. (17 Wall.) 453.
48. *Id.* at 456.
49. 157 U.S. 659 (1895).
50. HARMON, *supra* note 26, at 173.
51. 316 U.S. 241 (1942).
52. *Id.* at 243-45.
53. *Id.* at 252.

exhaustion doctrine applies both when the article is sold in its completed form and when it is sold in an uncompleted form enabling the buyer to finish the product.[54] Thus, regardless of whether the article is sold in either its finished or unfinished form the patent owner has "parted with his right to assert the patent monopoly with respect to it and is no longer free to control the price at which it may be sold."[55] The *Univis* Court also stated that "the purpose of the patent law is fulfilled with respect to any particular article when the patentee has received his reward for the use of his invention by the sale of the article, and that once that purpose is realized the patent law affords no basis for restraining the use and enjoyment of the thing sold."[56]

In the 1980s, the Federal Circuit Court of Appeals heard two cases applying the patent exhaustion doctrine to license agreements. The first was *Lisle Corp. v. Edwards*[57] in which Edwards licensed Lisle to manufacture tools covered by his patents. The license agreement prohibited Lisle from sublicensing the tool patents.

Lisle manufactured the patented tools for Snap-On Corporation and marked the tools with Snap-On's trademark but not the patent notice that was required under the licensing agreement.[58] Edwards sued both Lisle and Snap-On for patent infringement on the basis that Lisle's manufacture of the tool with Snap-On's labeling constituted a manufacturing sublicense through which Lisle made Snap-On a de facto manufacturer. Edwards claimed that this activity constituted sublicensing which was prohibited under the licensing agreement. He argued that the tools manufactured for Snap-On violated the license agreement and, therefore, infringed his patents.[59] However, the Federal Circuit held that the nonexclusive license agreement authorized the sale of tools by Lisle and that resale did not create a sublicense.[60] Therefore, the sale of the tools by Lisle to Snap-On was an authorized first sale, which is a defense to the charge of patent infringement by Edwards.

The second case was *Unidisco, Inc. v. Schattner,*[61] in which Schattner granted Girard an exclusive license to use its "'001 patent." The license agreement provided that Girard could not sublicense the "'001 patent" without written approval by Schattner. Girard entered into an exclusive distributorship with Unidisco. Schattner claimed that the Girard-Unidisco exclusive distributorship agreement was an illegal sublicense, and, therefore, the products sold to Unidisco infringed his patent.[62]

The *Unidisco* court held that "[r]esale of the product by Unidisco could not infringe the patent if Unidisco purchased the product from an authorized seller."[63] Girard's sale of the product to an exclusive distributor was an authorized sale because the Girard-Unidisco relationship did not create a sublicense, and the sale did not violate the terms of

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54. *Id.*

55. *Id.* at 251.

56. *Id.*

57. 777 F.2d 693 (Fed. Cir. 1985).

58. *See* 35 U.S.C. § 287 (1988).

59. *See supra* note 28 and accompanying text.

60. *Lisle*, 777 F.2d at 695 (The holding of the Federal Circuit Court of Appeals was conclusory and did not establish any rationale for its decision.).

61. 824 F.2d 965 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1042 (1988).

62. *See supra* note 28 and accompanying text.

63. 824 F.2d at 968.

the license agreement because the license agreement allowed Girard to sell the products.[64] Once again, the sale of the products by Girard to Unidisco was an authorized first sale, which is a defense to the charge of patent infringement by Schattner.

II. THE PATENT EXHAUSTION DOCTRINE APPLIED TO FOUNDRY AGREEMENTS

Companies with insufficient manufacturing capacity often contract with entities that have excess manufacturing capacity to manufacture their products. These contracts are called foundry agreements.[65] Foundry agreements are useful for small companies that design products but have little, if any, manufacturing capability.

Under a typical foundry agreement, the design firm submits the design of the product to the foundry, which manufactures the product and offers minimal design modifications for manufacturing purposes only. The design firm generally retains all intellectual property rights to the product. Therefore, the foundry has no right to exclude others from making, using or selling the invention nor to make or sell the invention itself. Foundry agreements provide the socially desirable function of allowing a small entity to design and produce a product with minimal capital outlay.

Two recent cases in the Federal Circuit Court of Appeals have addressed the situation where an unlicensed design firm contracted with a foundry, licensed by a patent holder, to make a product which infringed the patent holder's patent.[66] The unlicensed design firm claimed that the patent exhaustion doctrine precluded the patent holder from asserting patent infringement claims because an authorized first sale occurred between the licensed foundry and the unlicensed design firm. More specifically, the unlicensed design firm claimed that the licensed foundry manufactured a product that it was permitted to manufacture under the licensing agreement with the patent holder and then sold the authorized product to the unlicensed design firm.

This argument was successful. However, the result of permitting an unlicensed design firm to have its infringing product manufactured without the consent of the patent owner undermines the policy underlying the patent system. In effect, the unlicensed design firm is using the patent exhaustion doctrine to legalize an activity that should be deemed patent infringement.

A. The Atmel Case

In *Intel Corp. v. United States Int'l Trade Comm'n* ("*Atmel*"),[67] Intel and Sanyo entered into a patent cross-licensing agreement. The agreement granted Sanyo the right

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64. *Id.*

65. *See* Cyrix Corp. v. Intel Corp., 803 F. Supp. 1200, 1204 (E.D. Tex. 1992), *appeal dismissed,* 9 F.3d 978 (Fed. Cir. 1993) ("'[F]oundry' work . . . refers to arrangements in which a semiconductor company makes and sells to its customers integrated circuit products, the designs for which were developed or owned by the customers.").

66. Intel Corp. v. United States Int'l Trade Comm'n, 946 F.2d 821 (Fed. Cir. 1991) [hereinafter *Atmel*]; Intel Corp. v. ULSI Systems Technology, Inc. 995 F.2d 1566 (Fed. Cir. 1993), *cert. denied,* 114 S. Ct. 923 (1994) [hereinafter *ULSI*].

67. 946 F.2d 821.

to make, use or sell "any Sanyo . . . products" under Intel's patents.[68] Sanyo entered into foundry agreements with Atmel Corporation and General Instrument Corporation and Microchip Technology Incorporated (GI/M) under which Sanyo manufactured Erasable Programmable Read-Only Memories (EPROMs) for Atmel and GI/M. The EPROMs, designed by Atmel and GI/M, infringed several Intel patents. Intel filed a complaint with the United States International Trade Commission ("Commission") to prevent Atmel and GI/M from importing the infringing EPROMs into the United States. The Commission assigned the investigation of Intel's complaint to an administrative law judge (ALJ). Based upon the ALJ's findings, the Commission concluded that the EPROMs imported by Atmel and GI/M infringed the Intel patents and ordered Atmel Corp. and GI/M to cease and desist from importing EPROMs.[69] Atmel argued that "its EPROMs did not infringe any of the Intel patents because the EPROMs were made by Sanyo under Sanyo's cross-licensing agreement with Intel" and, therefore, the patent exhaustion doctrine provided a defense to Intel's claim of patent infringement.[70]

The ALJ addressed the question of the Intel/Sanyo cross-licensing agreement by reasoning:

> The interpretation of the licensing agreement as proposed by Atmel would mean that any company that was unable to obtain a license from Intel but still wanted to make its own parts practicing Intel patents could employ Sanyo as a foundry and circumvent Intel's patents. Without something to explain why the parties would have intended such a result, the agreement will not be given this strained construction.[71]

The International Trade Commission adopted the ALJ's decision on this issue.[72]

On appeal, the Federal Circuit Court of Appeals addressed the patent exhaustion doctrine as applied to the foundry agreement by stating:

> 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

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68. *Id.* at 826. The language of the cross-license "any Sanyo . . . products" will hereinafter be referred to as the Sanyo limitation. More specifically the cross-licensing agreement between Intel and Sanyo provides that:

> Intel hereby grants and will grant to Sanyo an [sic] non-exclusive, world-wide royalty-free license without the right to sublicense except to its Subsidiaries, under Intel Patents which read on any Sanyo semiconductor material. . . . Sanyo hereby grants and will grant to Intel a non-exclusive world-wide, royalty-free, license without the right to sublicense except to its Subsidiaries, under Sanyo Patents which read on any Intel Semiconductor Device . . . for the lives of such patents to make, use and sell such products.

Id. at 826 n.9.

69. *Id.* at 825.

70. *Id.* at 826.

71. *Id.* at 827.

72. *Id.*

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.[73]

The *Atmel* court then considered the ALJ's arguments and found that "Atmel has not established its license defense to infringement, and that the ALJ's reasoning is persuasive."[74] The *Atmel* court adopted a broad rule that in the absence of any evidence of contrary intent, the Intel-Sanyo cross-license agreement would not be construed to allow Sanyo to operate as a foundry for third parties to circumvent Intel's patent rights.[75]

After adopting this broad rule, the *Atmel* court analyzed the Intel-Sanyo cross-license agreement and specifically addressed the limitation in the agreement that Sanyo could only make, use and sell Sanyo products.[76] The *Atmel* court stated that "the words 'Sanyo . . . products' . . . are properly construed to cover only Sanyo designed and manufactured products and to exclude parts designed by others."[77]

B. The Intel v. ULSI Case

In June, 1993, the Federal Circuit Court of Appeals allowed an unlicensed design firm to use the patent exhaustion doctrine as a defense to sanitize an infringing product through a licensed foundry.[78] This case overruled a federal district court decision which held that: (1) the defendant's (ULSI) product infringed every element of three claims of the patent owner's (Intel) patent, (2) the infringed patent was valid and (3) the cross-license agreement between the patent owner and the foundry (Hewlett-Packard) did not provide a defense.[79]

On January 10, 1983, Intel and Hewlett-Packard (HP) entered into a cross-license agreement.[80] On August 2, 1988, ULSI and HP entered into a foundry agreement for the manufacture of coprocessor chips. Under the foundry agreement, ULSI supplied HP with proprietary design specifications and HP manufactured and shipped the completed coprocessor chips to ULSI. ULSI then sold the chips as ULSI products. ULSI owned the rights to its coprocessor chips and HP had no rights to the chips. On February 4, 1991,

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73. *Id.* at 826 (citing United States v. Univis Lens Co., 316 U.S. 241, 250-52 (1942)).

74. *Id.* at 828.

75. *Id.*

76. *Id.*

77. *Id.*

78. Intel Corp. v. ULSI Sys. Technology, Inc., 995 F.2d 1566 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 923 (1994).

79. Intel Corp. v. ULSI Sys. Technology, Inc., 782 F. Supp. 1467 (D. Or. 1991), *rev'd*, 995 F.2d 1566, *cert. denied*, 114 S. Ct. 923 (1994).

80. *Id.* at 1473-74. The cross-license agreement provides, in part:

> 1. [Hewlett-Packard] hereby grants Intel an irrevocable, retroactive, nonexclusive, world-wide, royalty-free license under all patents and patent applications owned and controlled by [Hewlett-Packard] having a first effective filing date prior to January 1, 2000, said license to be effective until the expiration of said patents. 2. Intel hereby grants [Hewlett-Packard] an irrevocable, retroactive, nonexclusive, world-wide, royalty-free license under all patents and patent applications owned and controlled by Intel having a first effective filing date prior to January 1, 2000, said license to be effective until the expiration of said patents.

Intel became aware of the ULSI chips and discovered that the chips infringed at least one of their patents. On July 29, 1991, Intel brought a patent infringement action against ULSI.[81]

Like Atmel Corp. in the *Atmel* case, ULSI argued that the patent exhaustion doctrine was a defense to infringement.[82] Specifically, ULSI argued that the "sale of the coprocessors by HP to ULSI was a 'first sale' that extinguished Intel's patent rights with respect to those products."[83]

The district court relied on the testimony of witnesses to find that "neither Intel nor Hewlett-Packard intended their agreement to be so broad as to grant the other party the power to sublicense any patent granted under the Intel/Hewlett-Packard agreement."[84] The court continued, "[s]ince both Intel and Hewlett-Packard have attached the same meaning to their contract, the court will interpret the Intel/Hewlett-Packard agreement in accordance with that meaning."[85] The district court also stated that Intel's patent rights could not be extinguished under the patent exhaustion doctrine because a sale of coprocessor chips did not occur between HP and ULSI.[86] The court found that no sale took place because HP never "assumed any ownership rights in any ULSI product and had no right to use or sell any ULSI product."[87]

The Federal Circuit Court of Appeals reversed the district court in a 2-1 decision, finding that a sale of coprocessor chips did occur between HP and ULSI and that ULSI was, therefore, allowed to use the patent exhaustion doctrine as a defense to infringement.[88] Circuit Judge Plager began his dissenting opinion by stating, "ULSI has managed to take a shield the law provides to purchasers of products containing patented inventions and turn it into a sword to cut off the legitimate rights of the patent owner."[89]

1. ULSI Majority Opinion.—The majority opinion, written by Circuit Judge Lourie, initially suggested that the "longstanding principle" of the patent exhaustion doctrine "applies similarly to a sale of a patented product manufactured by a licensee acting within the scope of its license" as it does to the sale of a patented product by the patent owner.[90] The majority then considered whether there was a sale of patented coprocessors by HP to ULSI or whether HP merely sold its manufacturing services to ULSI.[91]

The majority's review of the HP-ULSI foundry agreement led it to conclude that the agreement in fact involved the sale of coprocessors, not the sale of services.[92] According

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81. *ULSI*, 995 F.2d at 1567.

82. *See supra* text accompanying note 70.

83. *ULSI*, 995 F.2d at 1568.

84. *ULSI*, 782 F. Supp. at 1474-75.

85. *Id.* (citing RESTATEMENT (SECOND) OF CONTRACTS § 201(a) (1979)); HARMON, *supra* note 26, at 214.

86. *ULSI*, 782 F. Supp at 1475 n.7.

87. *Id.*

88. *ULSI*, 995 F.2d at 1570.

89. *Id.* at 1571 (Plager, J., dissenting).

90. *Id.* at 1569.

91. *Id.* at 1568-69.

92. *Id.* at 1569.

to the majority, the agreement referred many times to the sale of chips, and, moreover, the agreement included a delivery schedule for shipment of the chips.[93]

The majority stated that the licensed seller of a patented product need not own the intellectual property rights to the product for a sale to occur.[94] "Who designed the chip and whether it embodies inventions other than Intel's have no bearing on the controlling issue whether the 'C87 coprocessors were sold by HP to ULSI and thus extinguished Intel's patent rights relating to those products."[95] The Intel-HP cross-licensing agreement authorized HP to make and sell the ULSI chips, depriving Intel of any claim of infringement.[96] Had Intel limited the cross-licensing agreement in "some relevant way," then the result might have been different and "Intel might thereby have retained its right to proceed against those who entered into foundry agreements such as the present one."[97]

The majority noted that in 1983, when HP and Intel entered into the cross-licensing agreement, Intel received consideration for the agreement that it believed was adequate. Therefore, it could not "renege on that grant to avoid its consequences."[98] The court also rejected Intel's argument that the sale of chips by HP to ULSI constituted a "de facto sublicense,"[99] stating that it had found a similar argument in *Lisle* to be "without merit and specious."[100] In this case, the foundry agreement between HP and ULSI was not a sublicense because "HP did not empower ULSI to make Intel-patented chips or to use or sell any such chips except those lawfully sold to it by HP."[101]

In addition, the majority stated that Intel's contention that HP was not authorized to sublicense was irrelevant because the HP-ULSI agreement was a contract for the manufacture and sale of chips and not a sublicense.[102] Therefore, "ULSI is immune from infringement, not because it was a sublicensee, which it was not, but because HP was a licensed and therefore legitimate source of the chips. Moreover, ULSI was not required to be sublicensed in order to provide its chip design to HP."[103]

Finally, the majority addressed the *Atmel* decision,[104] focusing on the *Atmel* court's recognition of the Sanyo limitation in the Intel-Sanyo cross-license agreement.[105] No similar limitation existed in the Intel-HP cross-license agreement restricting "HP's right to sell or serve as a foundry" and make infringing products for an unlicensed third party such as ULSI.[106] Therefore, the court found that because no provision in the Intel-Sanyo

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93. *Id.*
94. *Id.*
95. *Id.*
96. *Id.*
97. *Id.*
98. *Id.*
99. *Id.*
100. *Id.*; *see supra* note 60 and accompanying text.
101. *ULSI*, 995 F.2d at 1570.
102. *Id.*
103. *Id.*
104. *See supra* note 67 and accompanying text.
105. *ULSI*, 995 F.2d at 1570; *see supra* note 76 and accompanying text.
106. *ULSI*, 995 F.2d at 1570.

cross-license agreement prevented HP from acting as a foundry, HP was permitted to act as a foundry.[107]

2. ULSI Dissenting Opinion.—Judge Plager asserted that the patent exhaustion doctrine did not apply to the situation presented in this case for two reasons.[108] First, the first sale of the chips was from ULSI to its customers and not from HP to ULSI.[109] The relationship between HP and ULSI involved a sale of services and not a sale of coprocessor chips. Second, HP's activity was not within the scope of the Intel-HP cross-license agreement.[110]

With respect to the first point, Judge Plager set forth two facts that demonstrated that the relationship between HP and ULSI resulted in the sale of services by HP and not the sale of chips: (1) HP did not sell ULSI a product incorporating Intel's patented invention but rather sold ULSI raw materials and manufacturing expertise,[111] and (2) HP could not have manufactured excess chips of ULSI's design and sold them to third parties because HP did not own the intellectual property rights in the chips.[112] The crucial question in determining whether the relationship produced the sale of services or the sale of a product is "whose design and whose property was involved."[113]

On the second point, Judge Plager considered whether Intel authorized HP's sale to ULSI.[114] He noted that the language of the Intel-HP cross-license expressed an intent to increase the freedom of design for both parties.[115] Judge Plager also noted that both parties agreed that there was "no intent to immunize third party infringers," or, more specifically, there was no intent to grant a sublicense under any Intel patents licensed to HP.[116] In this respect, Judge Plager agreed with the district court finding that neither Intel nor HP intended their cross-license agreement to allow the other party to sublicense any patent granted under the cross-license.[117]

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107. *Id.* (Plager, J., dissenting).

108. *Id.* at 1572 (Plager, J., dissenting).

109. *Id.*

110. *Id.*

111. *Id.* The product was ULSI's, never HP's, and assuredly not Intel's. *Id.*

112. *Id.*

113. *Id.*

114. *Id.* at 1572-73. (citing General Talking Pictures Corp. v. Western Elec. Co., 304 U.S. 175, 182 (1938) and Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700, 703 (Fed. Cir. 1992)). In *General Talking Pictures*, a licensee had a nonexclusive license to sell a patented product only to a selected market. The licensee knowingly sold and the purchaser knowingly bought the product outside the confines of the license. The Court found that both parties infringed the patent embodied in the product. *General Talking Pictures*, 304 U.S. at 181-82. For a discussion of *Mallinckrodt*, *see* text accompanying *infra* notes 165-74.

115. *ULSI*, 995 F.2d at 1573 (Plager, J., dissenting).

116. *Id.* at 1573-74 ("[T]he Associate General Counsel and Director of Intellectual Property for HP testified that '[n]either Intel nor HP intended to grant the other the right to sublicense any patents licensed to the other under the patent cross-license agreement.' Further, he testified that 'HP did not intend to grant a sublicense under any Intel patents licensed to HP.'").

117. *Id.* at 1573; *see supra* note 84 and accompanying text.

According to Judge Plager:

> The use of the term "sublicense" by counsel and court must be understood to mean that the cross-license did not give HP the power to authorize third parties to separately design and manufacture (or have manufactured) products incorporating the patented invention. Thus HP could itself manufacture and sell products with the patented invention incorporated in them (and purchasers of these products from HP would be protected in their use under the 'first sale' principle), but HP was not licensed to authorize others to do so.[118]

Next, the dissent considered the majority's interpretation of the *Lisle* decision.[119] According to Judge Plager,

> *Lisle* does not stand for a general rule that an argument that sublicensing is prohibited under a particular license is necessarily "specious." The substance of the transaction at issue should control whether it is "sublicensing," and the terms of the license as intended by the parties should determine whether such "sublicensing" is permitted.[120] Judge Plager concluded that the substance of the HP-ULSI transaction was sublicensing and that the Intel-HP cross-license did not permit such sublicensing.[121]

Judge Plager found that *Atmel* presented a similar question to that posed by *ULSI*.[122] He discussed the general rule enunciated in *Atmel* and agreed that "[w]ithout something to explain why the parties would have intended such a result [allowing an unlicensed third party to sanitize infringing products through a licensed foundry], the agreement will not be given this strained construction."[123]

As to whether a sale of the accused product actually occurred, Judge Plager observed that ULSI indemnified HP against any claims of patent infringement which might arise from the ULSI design, even though ULSI assured HP that it knew of no intellectual property concerns about the design.[124] Judge Plager concluded that if HP had intended to sell ULSI a chip that embodied Intel's patent then this indemnification clause would not have been necessary.[125]

The opinion reiterates the fact that HP did not own the ULSI invention. Because HP never had ownership rights in the invention, something other than the accused product must have been sold to ULSI.[126] "[T]he overall context of the contract demonstrates that

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118. *ULSI*, 995 F.2d at 1573 (Plager, J., dissenting).

119. *See supra* note 100 and accompanying text.

120. *ULSI*, 995 F.2d at 1574 (Plager, J., dissenting).

121. *Id.* Judge Plager noted that in *Lisle* the licensee manufactured and sold products of the patented licensed invention to a third party. However, in *ULSI* the licensee (HP) manufactured the third party's invention. *Id.*

122. *Id.*; *see supra* note 67 and accompanying text.

123. *ULSI*, 995 F.2d at 1575 (Plager, J., dissenting); *see supra* note 71 and accompanying text.

124. *ULSI*, 995 F.2d at 1575 (Plager, J., dissenting) (citing Affidavit of Richard R. Duncombe, HP Sales Manager, Jt. App. at 411).

125. *Id.*

126. *Id.*

the sale was of services, measured per chip, rather than sale of any technology (be it Intel's or ULSI's), as embodied in each chip."[127] Judge Plager concluded that because the first sale of the coprocessor chips was by ULSI, and not HP, that sale is not protected by the patent exhaustion doctrine.[128]

3. Analysis.—The *ULSI* decision created an inequitable result that will have negative implications on the way parties view patent procurement and patent licensing agreements. Judge Plager expressed this thought eloquently: "ULSI has managed to take a shield the law provides to purchasers of products containing patented inventions and turn it into a sword to cut off the legitimate rights of the patent owner."[129]

The *ULSI* court could have used several legitimate grounds to find that the patent exhaustion doctrine did not apply to the ULSI coprocessors: 1) *Atmel* established a rebuttable presumption that cross-license agreements do not permit unlicensed third parties to sanitize their products through licensed foundries;[130] 2) The relationship between HP and ULSI resulted in the sale of services rather than the sale of a product; and 3) The relationship between HP and ULSI created a sublicense.

a. The consideration argument.—Intel received consideration for its patents under the cross-license agreement with HP.[131] Intel apparently believed that this consideration was adequate at the time it entered into the agreement and was not permitted to avoid the consequences of its decision.[132] Thus, to allow an unlicensed third party (ULSI) to use a licensed foundry (HP) to sanitize an infringing product may be reasonable because to allow the patent holder (Intel) to sue the unlicensed design firm for patent infringement would allow the patent owner/licensor to receive "double consideration." However, this argument would be sound only if the cross-license agreement expressly authorized the licensees to act as foundries in this situation.

The patent cross-license agreement in *ULSI*, and these agreements in general, are not exclusive. Therefore, Intel and HP have received consideration for the use of their patent portfolio from other companies that they had licensed. It is inequitable to allow any unlicensed party to sanitize its infringing products through another party licensed by the patent holder because the patent holder and licensees have paid[133] for the use of the patent and the unlicensed third party has not paid.

Only if the parties to the original cross-license agreement expressly agree to permit foundry agreements should the consideration to the cross-license agreement be deemed sufficient to preclude the patent holder from claiming patent infringement. Moreover, courts should require express language in the cross-license agreement specifying that foundry agreements are permitted. The *ULSI* majority concluded that the parties to the

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127. *Id.* at 1575-76.

128. *Id.* at 1576.

129. *Id.* at 1571.

130. *See supra* text accompanying note 75.

131. *See supra* note 109 and accompanying text.

132. *See supra* note 109 and accompanying text.

133. The patent holder has paid through research and development costs and the licensees have paid consideration for the license.

HP-Intel cross-license agreement agreed to allow foundry agreements despite the absence of express language.[134]

Although the majority in *ULSI* analogized to *Univis* on the consideration issue, *Univis* is distinguishable.[135] In *Univis*, the patent exhaustion doctrine was invoked because the patent holder was trying to impose conditions on future transferees of the product.[136] In *ULSI*, the patent holder was not trying to impose conditions on future transferees but rather was trying to prevent unlicensed third parties from sanitizing their products through a licensed foundry. In *Univis*, the patent holder obviously had received adequate consideration for his product. The situation in *Univis* would be analogous to the situation in *ULSI* only if an unlicensed third party used one of Univis Corporation's licensees to sanitize infringing products.

b. Interpretation of the Atmel decision.—The majority and dissent in *ULSI* interpreted the *Atmel* decision differently. Judge Plager's dissent followed the general rule[137] announced in *Atmel* that a cross-license agreement must expressly allow foundry agreements before the patent exhaustion doctrine can be used as a defense to patent infringement by an unlicensed third party. The majority restricted its interpretation of *Atmel* to the narrow holding that the patent exhaustion doctrine applies unless the cross-license agreement includes a restriction similar to the Sanyo limitation (Sanyo may only make, use or sell Sanyo products) found in *Atmel*.[138]

In the *Atmel* decision, the court approved of the ALJ's finding and established a general rule that "[w]ithout something to explain why the parties would have intended such a result, the agreement will not be given this strained construction."[139] The *Atmel* court rejected a "strained construction" of the Sanyo-Intel cross-licensing agreement, which would have allowed foundry agreements. Yet the *ULSI* majority adopted this very construction of the Intel-HP cross-licensing agreement.

In light of the evidence produced regarding the parties' intentions under the cross-license agreement, why did the majority in *ULSI* give the Intel-HP cross-license such a "strained construction" by allowing the patent exhaustion doctrine to be used as a defense to patent infringement by an unlicensed party in a foundry agreement? A thorough reading of the *Atmel* decision clearly shows that the court adopted the general rule but then applied it to the specific fact situation presented in *Atmel*.[140] After setting forth this general rule, the *Atmel* court focused on the language of the Sanyo-Intel cross-license agreement, which provided that only Sanyo products were covered by the license.[141] The *Atmel* court did not look at the language of the agreement as proof that the parties did not want a "strained construction" of the cross-license agreement. This language merely reinforced the conclusion that the court had already reached.

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134. *See supra* note 107 and accompanying text.
135. *See supra* note 51 and accompanying text.
136. *See supra* note 56 and accompanying text.
137. *See supra* text accompanying note 123.
138. *See supra* text accompanying note 107.
139. *Atmel*, 946 F.2d 821, 827 (Fed. Cir. 1991).
140. *Id.* at 826-28.
141. *Id.*

Atmel should be interpreted as requiring the party that favors permitting foundry agreements under a cross-license agreement to show that the parties to the cross-licensing agreement intended this result. Therefore, in *ULSI*, ULSI should have had the burden of proving that HP and Intel intended to allow an unlicensed third party such as ULSI to sanitize its infringing products through HP. Neither the language of the cross-license agreement, nor the testimony by the witnesses, leads to a finding that HP and Intel intended such a result.[142]

c. Sale of services v. sale of a product.—The *ULSI* majority concluded that the issue of whether the unlicensed third party (ULSI) designed the accused product was irrelevant, as was the issue of whether the licensed foundry (HP) owned intellectual property rights in the accused product.[143] Judge Plager disagreed, saying that these are the determining issues.[144] Judge Plager questioned what the licensed foundry is selling if it does not own the intellectual property rights in the product.[145]

A licensed foundry does not own intellectual property rights to the invention. By definition, an assignment transfers an interest in the patent itself; a license transfers an interest that is less than the patent itself.[146] In this respect, the majority's argument that ownership of the intellectual property rights is irrelevant is correct because a licensed foundry does not own an interest in the patent holder's patent.

A licensed foundry is never given an affirmative right to make, use and sell the product; it only has a promise from the licensor that it will not be sued for patent infringement.[147] However, even the patent holder does not have an affirmative right to make, use or sell. The patent owner only has the negative right to exclude others from making, using or selling the patented invention. The licensee is allowed to make, use or sell the patent holder's patented invention to the same extent as the patent holder.[148] In this respect, Judge Plager's emphasis on who owns the intellectual property rights to the invention is correct.

In *ULSI*, HP purchased the raw product and transformed it into a coprocessor according to ULSI's design. From the testimony, HP obviously did not even have a license to make, use or sell the ULSI-designed chips because it could not have sold the chips to anyone other than ULSI.[149] HP owned only the personal property rights to each chip, and even that was limited. Therefore, the majority allowed the "sale" from HP to ULSI to exhaust Intel's patent rights when HP did not even have a license to make, use or sell the product it was selling.

The *ULSI* majority found that the language in the Intel-HP cross-license agreement referring to the sale of chips and including a delivery schedule for their shipment demonstrated that the relationship between HP and ULSI resulted in the sale of a product

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142. *See supra* note 116.

143. *See supra* note 94 and accompanying text.

144. *See supra* note 113 and accompanying text.

145. *ULSI*, 995 F.2d. 1566, 1575 (Fed. Cir. 1993) (Plager, J., dissenting), *cert. denied*, 114 S. Ct. 923 (1994).

146. BLACK'S LAW DICTIONARY 920 (6th ed. 1990).

147. *See supra* note 26 and accompanying text.

148. *See supra* note 15 and accompanying text.

149. *See supra* note 87 and accompanying text.

and not of services.[150] Judge Plager, however, argued that HP provided only the raw material and its manufacturing expertise and that HP did not even own a license to exclude others from making, using or selling the invention.[151]

When analyzed as a whole, the ULSI-HP relationship is clearly a sale between HP and ULSI involving the sale of services, not the sale of a product. Because HP provided only raw materials and manufacturing expertise, and because HP could not sell the ULSI product to anyone other than ULSI,[152] the sale between HP and ULSI had to be of something other than a product.

d. The sublicense argument.—Another topic of debate between the majority and dissent was the majority's assertion that similar arguments were presented in *Lisle* and *ULSI*.[153] In *Lisle*, as opposed to *ULSI*, the licensee was acting under a license which permitted it to sell the product to any party. Also in *Lisle*, the licensee was not making an infringing product designed by an unlicensed third party. Therefore, the argument presented in *Lisle* was not similar to the one presented in *ULSI*.

The *ULSI* majority stated that the HP-ULSI relationship did not result in a sublicense because "HP did not empower ULSI to make Intel-patented chips or to use of any such chips except those lawfully sold to it by HP."[154] Judge Plager, however, found that the substance of the transaction between HP and ULSI resulted in a sublicense.[155] He noted that HP was authorized to make and sell products which incorporated the Intel-patented invention.[156] However, Judge Plager found that the HP-ULSI relationship involved ULSI designing an infringing product and HP authorizing ULSI to make and sell the product.[157]

If the relationship between HP and ULSI did create a sublicense, then ULSI could have any foundry manufacture its product. Although the HP-ULSI relationship did not bring about such a result, the argument that the substance of the relationship created a "de facto sublicense" is persuasive.

HP did allow ULSI to make a product that no one other than Intel, HP or another Intel licensee could lawfully have made. This factor by itself does not conclusively establish that the HP-ULSI relationship resulted in a sublicense because if ULSI wanted to purchase any product incorporating an Intel patented invention it would have to purchase it from Intel, HP or another licensee.

However, a second aspect of the foundry agreement between HP and ULSI leads to the conclusion that, in substance, the relationship between HP and ULSI was a sublicense. Specifically, HP could not make and sell the ULSI-designed invention to anyone other than ULSI. HP did not even have the equivalent of a license to practice ULSI's invention. Therefore, HP did authorize ULSI to make and sell an invention in which ULSI owned all the intellectual property rights.

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150. *See supra* note 93 and accompanying text.

151. *See supra* notes 111-12 and accompanying text.

152. HP did not even have a license to the ULSI invention.

153. *See supra* notes 100, 119 and accompanying text.

154. *See supra* note 101.

155. *See supra* note 122.

156. *See supra* note 118 and accompanying text.

157. *See supra* note 118 and accompanying text.

Returning to the example in Figure 1,[158] analogous property *A* is owned by Intel and analogous property *B* is owned by ULSI. The substance of the HP-ULSI relationship resulted in HP allowing ULSI to trespass over Intel's analogous property to reach its property. Thus, the substance of the HP-ULSI relationship resulted in a sublicense.

If ULSI and HP were acting under a joint venture arrangement to produce a product (*i.e.* both contributed to the design and both had an interest in the intellectual property rights in the product), then ULSI and HP, as one party, would fall under the protection of the HP-Intel cross-licensing agreement. Returning to the example presented in Figure 1, the analogous property owned by *A* belongs to Intel and the analogous property owned by *B* now belongs to both HP and ULSI. Now, both HP and ULSI must cross over Intel's property to reach their property. Here, HP and ULSI as a party are authorized under the Intel-HP cross-licensing agreement to trespass on *A*'s property.

The facts of the *ULSI* case show that the substance of the HP-ULSI relationship resulted in a sublicense. The following case, applying the patent exhaustion doctrine to a foundry agreement, presents a different set of facts that provide stronger support for the patent exhaustion doctrine to preclude a patent holder from asserting a patent infringement claim.

C. The Cyrix Case

In *Cyrix Corporation v. Intel Corporation,*[159] Intel and Mostek Corporation entered into a patent cross-license agreement. SGS-Thomson was the corporate successor to the original Mostek Corporation.[160] Cyrix Corporation designed a coprocessor in collaboration with SGS-Thomson. The final design included proprietary information of both Cyrix and SGS-Thomson. Each party had rights to the coprocessor design and under an agreement neither party could provide the design to a third party without the permission of the other. SGS-Thomson manufactured the coprocessors and delivered them to Cyrix. Thus, SGS-Thomson was the licensed foundry just as HP was in *ULSI,* and Cyrix was the unlicensed third party just as ULSI was in *ULSI.* Intel alleged that the coprocessor infringed one of its patents and, therefore, Cyrix was guilty of patent infringement. Cyrix claimed that the patent exhaustion doctrine barred Intel from bringing a patent infringement action against Cyrix.

The facts of *Cyrix* provide stronger support for the application of the patent exhaustion doctrine to prevent Intel from asserting patent infringement than did the facts in *ULSI.* The parties to the original cross-license in *Cyrix* apparently intended to allow foundry agreements, but the converse was true in *ULSI.*[161] Also, in *Cyrix* both the

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158. *See supra* text accompanying notes 23-30.

159. 803 F. Supp. 1200 (E.D. Tex. 1992), *appeal dismissed,* 9 F.3d 978 (Fed. Cir. 1993).

160. Although disputed in the case, it is assumed for the purposes of this Note that SGS-Thomson is licensed by Intel.

161. 803 F. Supp. at 1204-05. Both Intel and Mostek were involved in the foundry business at the time of the agreement and expressed their intention to remain in the foundry business. The goals of Intel and Mostek were to provide "patent peace" between the parties and allow freedom of action for the companies to pursue their business activities. *Id.*

licensed foundry and the third party participated in the design and had an interest in the intellectual property rights of the design. Once again, in *ULSI,* the converse was true.[162]

The district court found for Cyrix on the patent exhaustion doctrine issue.[163] Although the decision may be correct due to the facts of the case, the reasoning behind the decision is similar to that employed by the majority in *ULSI* and if applied to subsequent cases, it will lead to inequitable results such as that reached in *ULSI.*[164]

III. THE MALLINCKRODT DECISION

Mallinckrodt, Inc. v. Medipart, Inc.,[165] also decided by the Federal Circuit Court of Appeals, is another case that addresses the use of the patent exhaustion doctrine. One commentator suggests that this decision "will permit many patentees to limit, through contracts and notice restrictions, the exhaustion or first sale doctrine which has traditionally applied to patented items."[166] As opposed to *ULSI*, the court in *Mallinckrodt* displayed genuine concern for the rights of patent owners.

In *Mallinckrodt*, Mallinckrodt sold a patented device to deliver a "radioactive or therapeutic material in aerosol mist form to the lungs of a patient."[167] The device includes a nebulizer which generates the mist, a manifold which directs the airflow to the patient's mouth, a filter, tubing, mouthpiece and a noseclip. The patented devices display the patent number, trademark brand name and the inscription "Single Use Only." The instructions state that only one patient is to use the device. The device is then to be disposed of properly.[168]

Medipart provided a service to hospitals that wanted to reuse the device. Hospitals shipped the used equipment to Medipart, who employed Radiation Sterilizers, Inc. to expose the devices to radiation. Medipart checked the devices for damage or leaks and provided a new filter, tubing, mouthpiece and nose clip before shipping the "reconditioned" units back to the hospitals.[169]

The Federal Circuit Court of Appeals overruled the district court decision, finding that the restriction on reuse, "Single Use Only," was enforceable under the patent law.[170] The district court had based its holding on the patent exhaustion doctrine because the

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162. *Id.* at 1205-06. Cyrix conducted the initial design work, and Cyrix and SGS-Thomson incorporated the design into SGS-Thomson's trade secret "design rules." SGS-Thomson subsequently added more design input, including the "'active' layer" of the coprocessor. Every step of the manufacturing process was conducted by SGS-Thomson. *Id.*

163. *Id.* at 1214-15.

164. *Id.*

165. 976 F.2d 700 (Fed. Cir. 1992).

166. James B. Kobak, Jr., *Contracting Around Exhaustion: Some Thoughts About the CAFC's Mallinckrodt Decision*, 75 J. PAT. OFF. SOC'Y 550 (1993).

167. *Mallinckrodt*, 976 F.2d at 701.

168. *Id.* at 702.

169. *Id.*

170. *Id.* at 703.

patent owner's rights are exhausted after the first authorized sale of the patented product.[171]

The court of appeals found that the patent exhaustion doctrine does not stand for the proposition that no restriction or condition may be placed on the sale of a patented article.[172] The court conditioned this holding, stating that the restriction or condition must not violate some other law or policy such as patent misuse or antitrust law.[173] After refuting the district court's argument, the court of appeals stated, "The appropriate criterion is whether Mallinckrodt's restriction is reasonably within the patent grant, or whether the patentee has ventured beyond the patent grant and into behavior having an anticompetitive effect not justifiable under the rule of reason."[174]

Displaying genuine concern for the patent owner's right to exclude others, the court of appeals incorporated the right to exclude in the analysis of whether the restriction on the sale of a patented product is valid. The court was cautious not to limit the right to exclude others from making, using or selling the patented invention granted to patent owners. However, the majority opinion by the Federal Circuit Court of Appeals in *ULSI* did not exercise the same caution in limiting the patent owner's right to exclude or even appear to recognize its existence as a meaningful right.

CONCLUSION

As stated by Circuit Judge Plager in *ULSI*, "[A] sensible and socially desirable agreement between Intel and HP is turned into an unintended gift to all manner of infringers. The result creates a disincentive among competitors to invent rather than litigate, potentially disadvantaging companies in a volatile industry such as this in competing world-wide."[175] The majority opinion in the *ULSI* decision set a precedent that will lead to inequitable results in future cases, as it did in the present case. *ULSI* provides a disincentive for patent procurement and creates an uncertainty for companies presently in or entering into patent cross-license agreements.

The *ULSI* majority disregarded the effects this case has on the patent system. The success of the patent system is due largely in part to the seventeen-year monopoly that the inventor is given for disclosing his invention to the public to "promote science and the useful arts."[176] After *ULSI*, the exclusive right granted to the patent owner to make, use or sell the patented invention is limited if an unlicensed third party is allowed to "sanitize" an infringing product through a foundry agreement. This result is inequitable and the courts should be cautious before setting precedent which limits the right of a patent

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171. Mallinckrodt, Inc. v. Medipart, Inc., 15 U.S.P.Q.2d 1113, 1120 (N.D. Ill. 1990), *rev'd in part, vacated in part,* 976 F.2d 700 (Fed. Cir. 1992).

172. *Mallinckrodt*, 976 F.2d at 706-08 (citing Adams v. Burke, 84 U.S. (17 Wall.) 453 (1874)).

173. *Id.* at 708 (citing United States v. Univis Lens Co., 316 U.S. 241 (1942)).

174. *Id.* The patent grant to which the court refers is the right granted to the patentee to exclude others from making, using or selling the invention for a term of seventeen years. 35 U.S.C. § 154 (1988).

175. *ULSI*, 995 F.2d 1566, 1575 (Fed. Cir. 1993) (Plager, J., dissenting), *cert. denied*, 114 S. Ct. 923 (1994).

176. *See supra* notes 12-13 and accompanying text.

owner.[177] Reducing the inventor's incentive to disclose his invention to the public will do nothing but harm the patent system.

Patent cross-licensing agreements provide a socially desirable result by allowing companies to appropriate their resources to research and development instead of litigating patent rights. The *ULSI* reasoning will negatively impact the use of patent cross-license agreements that are prevalent among companies today. After *ULSI*, parties entering into a cross-licensing agreement must predict and set forth in their agreement with specificity any undesirable situations that might arise. In particular, after *ULSI,* if the parties to a cross-license agreement do not want an unlicensed third party to be able to sanitize an infringing product through a licensed foundry, they must expressly set forth that condition in the agreement.

One commentator reviewing the *ULSI* case would rely on a "sham transaction" analysis to determine whether unlicensed third parties to a cross-licensing arrangement can sanitize infringing products through a licensed foundry.[178] Mr. Richard H. Abramson states that parties to a cross-licensing agreement can act as foundries unless (1) the cross-license sets forth that the licensed parties cannot act as foundries or (2) the foundry relationship between the foundry and third party is a "sham transaction."[179] Mr. Abramson defines a "sham transaction" as one that is "designed solely to circumvent the patent laws."[180] However, Mr. Abramson draws the line at what conduct "circumvents the patent laws" at a very low level, so that the foundry agreement in the *ULSI* case does not constitute a sham transaction.[181] For example, Mr. Abramson would find a sham transaction where the unlicensed party manufactures the product under the licensed party's rights and then briefly passes title to the finished product through the licensed party, who then sells the product back to the unlicensed party.[182] Mr. Abramson justifies defining a sham transaction at such a low level by stating that foundry agreements are an economically efficient way for small design companies to remain competitive in today's global economy.[183]

Although it is easy to agree that foundry agreements are desirable for small design firms in today's global economy, small design firms should not be permitted to produce infringing products that they themselves cannot make by applying the patent exhaustion doctrine. Instead, the design firm can: (1) design a noninfringing product and produce it through a foundry agreement or (2) design a product that would infringe a patent, obtain a license to use that patent, and produce the product through a foundry agreement.

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177. *See supra* note 14 and accompanying text.

178. Richard H. Abramson, *When the Chickens Come Home To Roost: The Licensed Foundry Defense In Patent Cases*, COMPUTER L., Mar. 1993, at 1. Mr. Abramson was counsel of record for Chips & Technologies, Inc. in Nos. C-92-20111 and C-92-20112 (N.D. Cal. 1992). The case involved the same patent exhaustion doctrine question as in *ULSI* but was settled before the court addressed the patent exhaustion issue.

179. Abramson, *supra* note 178, at 1.

180. Abramson, *supra* note 178, at 1.

181. Abramson, *supra* note 178, at 8-9.

182. Abramson, *supra* note 178, at 8-9. *See* E.I. du Pont de Nemours & Co. v. Shell Oil Co., 227 U.S.P.Q. 233 (Del. Supr. 1985).

183. Abramson, *supra* note 178, at 2.

Another suggested guideline for courts to use involves the allocation of the burden of proof. In a patent infringement case, the alleged infringer has the burden of proving a defense to infringement.[184] Thus, the unlicensed third party has the burden of proving its defense for infringement. However, to fully carry out the intention of the *Atmel* court, the alleged infringer should also have a heightened burden of showing evidence of the intent of the parties in the cross-license agreement to allow foundry agreements with unlicensed third parties.

The broad rule announced in *Atmel* represents the best approach to this problem. Under this rule, an unlicensed third party may use the patent exhaustion doctrine as a defense to patent infringement only if the cross-license agreement expressly states that foundry agreements with unlicensed third parties are permitted.

Following the broad rule of the *Atmel* decision would remove the concerns created by the *ULSI* decision. However, if courts follow *ULSI* and require that the cross-license agreement or other evidence show that the parties to the cross-license agreement did not intend to allow foundry agreements, then the courts should not allow the patent exhaustion doctrine to be used as a defense to patent infringement if either of the following two situations is present: (1) if the cross-license agreement prevented sublicensing, then the relationship between the licensed foundry and the unlicensed third party should not result in a sublicense; or (2) the relationship between the licensed foundry and the unlicensed foundry should result in the sale of products rather than the sale of services.

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184. Met-Coil Systems v. Korners Unlimited, Inc., 803 F.2d 684, 687 (Fed. Cir. 1986).