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Judge Rules SGS-Thomson License Protects Cyrix

Ruling Has Broad Implications for Patent Protection

By Michael Slater

In a landmark ruling by U.S. District Court Judge Paul Brown, Intel was rebuffed in its attempt to assert patent infringement claims against Cyrix Corp. Judge Brown accepted Cyrix's claim that it is immune from claims of patent infringement because its chips are manufactured by SGS-Thomson, which has a patent cross-license agreement with Intel. The ruling is the first to clearly establish that a foundry's patent license agreements can protect any chips that it fabricates from claims of infringement, even if the chips are designed and sold by another company.

The specific issue in this lawsuit is whether Cyrix's "FasMath" math coprocessors infringe Intel's "Palmer" patent, which covers the way IEEE-compatible arithmetic is implemented in Intel's math coprocessors. Cyrix has pursued the foundry license defense as the simplest strategy to protect its products, but the company maintains that its designs do not infringe Intel's patents.

Judge Brown's decision puts Cyrix's chips in the clear—pending an appeal by Intel, of course—but only if the chips are manufactured by SGS-Thomson. Cyrix still must face the issue of infringement because some of its early FasMath wafers were fabricated by Taiwan Semiconductor Manufacturing Corp. (TSMC), which does not have a patent agreement with Intel.

While the case focused on Cyrix's math coprocessor, the principle it establishes applies equally to the company's 486SLC and 486DLC. SGS-Thomson's agreement with Intel covers all patents applied for through 1999, so the ruling protects any chips manufactured by SGS-Thomson for a very long time, giving Cyrix a safe harbor for its future products as well.

The issue is especially important because it has implications for other companies as well. In particular, Chips and Technologies is using the same defense against Intel's claims of patent infringement, as is ULSI Systems Technology. C&T uses Texas Instruments as its foundry, and ULSI uses Hewlett Packard. Both TI and HP have broad patent cross-license agreements with Intel, and many other companies (10 to 20, according to Cyrix executives) are believed to have such agreements as well. The specific wording in the agreements is important, however, so the precedent set in the Cyrix/SGS case may not be directly applicable.

If it is upheld, the ruling severely decreases the value of Intel's patent portfolio as a barrier to competition, since a chip designer need only use one of several foundries in possession of a patent license from Intel to avoid any possibility of prosecution for infringement. The only companies that would remain constrained by Intel's patents are those that manufacture their own chips and do not have licenses from Intel, and even these companies could always choose to use a foundry for products covered by Intel's patents.

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Patent Exhaustion

The key legal principle upon which Cyrix based its case is patent exhaustion. Once a patented item has been sold by the patent holder or licensee, the patent holder no longer has any rights with regard to its resale—the patent rights have been exhausted. The idea is that the inventor gets paid once for each item sold. No additional royalties are due, for example, when a distributor sells an item to an end user; the inventor cannot make any claim against the distributor. The primary precedent cited for this "first sale" doctrine is *U.S. v. Univis Lens Co.*, a 1942 Supreme Court case, but the principle was established as far back as 1873 in another Supreme Court decision.

The Cyrix/SGS situation is different, however, from that of a distributor (or, for that matter, from the Univis Lens case), because Cyrix is not merely a distributor—it designed the chip, and it retains ownership of the intellectual property. From Intel's viewpoint, Cyrix designed the chip, and Cyrix sells the chip; the fact that Cyrix's contractor, SGS-Thomson, has a license to Intel's patents should not, in Intel's view, be relevant.

Intel argues that Cyrix is the infringer because it created and sells the design. Judge Brown appears to reject this argument, however, stating in the *Intel v. Cyrix* decision that "It is irrelevant to the application of the patent exhaustion doctrine that an article was designed by another party."

Sale or Service?

Cyrix points to the "first sale" doctrine and asserts that the first sale of the chips is from the foundry to them. Intel's argument is that the foundry is not selling chips but is providing services. If there is no sale, there is no patent exhaustion.

Judge Brown did consider this issue, and he concluded that there is a sale. In support of this view, he points out that SGS-Thomson controls all aspects of the manufacturing; it purchases all the material used in the manufacturing; it is the first user of the chips (when it tests them); and it carries the risk of loss or damage during manufacturing. Clearly, the physical silicon is being sold to Cyrix by SGS-Thomson.

In Intel's view, however, the overriding issue is that there is no sale of the intellectual property; it always belongs to Cyrix. Intel asserts that while there is a sale of silicon from SGS-Thomson to Cyrix, there is not a sale of a math coprocessor. SGS-Thomson does not have the right to sell the Cyrix-designed chips to anyone else, and the price that SGS-Thomson gets for the chips it makes for Cyrix reflects only the value of the silicon processing, not the value of the chips as math coprocessors. Going back to the intent of the first sale doctrine, Intel argues that since the price of the sale from SGS-Thomson to Cyrix did not reflect the value of the math coprocessor patent, it was cheated of its one-time chance for being compensated. So far, the courts have declined to make the distinction between the sale of the intellectual property and the sale of the silicon.

Other Factors

In addition to claiming that SGS-Thomson's license should not protect the Cyrix chips, Intel questioned the validity of the license itself. The agreement was originally between Intel and Mostek, and SGS-Thomson acquired the license when it purchased Mostek in 1985. Intel claimed that SGS-Thomson was not entitled to inherit the license because it did not purchase "all or substantially all" of Mostek's assets, as the terms of the agreement require. Judge Brown soundly rejected this assertion, noting that the assets not purchased by SGS-Thomson were inconsequential, and further noting that over five years passed between Mostek's acquisition by SGS-Thomson and Intel's first claim that SGS-Thomson should not be allowed to assume the license.

With regard to the intent of the Intel/Mostek license, Judge Brown notes that both Intel and Mostek were engaged in some foundry business at the time the agreement was signed. In particular, Mostek was making Z80 microprocessors for Zilog, and "the Mostek-Zilog relationship was specifically brought to Intel's attention during the license negotiations. Mostek's President, L.J. Sevin, informed Intel's Chairman, Robert Noyce, about the Zilog relationship and Sevin understood from Noyce that the Z80 would be a 'licensed product'."

Intel does not dispute that the intent of the Intel/Mostek agreement was to provide a broad "patent peace" between the two companies, and Intel has not asserted any patent claims against SGS-Thomson. Intel argues that the Mostek/Zilog situation differs from the Cyrix/SGS case because the Z80's design did not violate Intel's patents. According to Intel, the understanding that the Z80 was a licensed product referred to process technology patents, not design patents. In Intel's view, a foundry's patent license agreement allows the foundry to use patented processes to manufacture chips for other customers, but it does not apply to patents that cover the chip design.

Precedents

There are two recent court cases that addressed similar issues. In one case, *Intel v. Atmel*, Atmel used Sanyo as a foundry and claimed that Sanyo's patent license from Intel protected Atmel from any claim of infringement. The Court of Appeals in this case ruled in

favor of Intel, but the decision depended on the specific wording of the agreement, which stated that Sanyo was licensed to use Intel's patents *in Sanyo products*. This key clause is absent in Intel's agreements with SGS-Thomson, Texas Instruments, and Hewlett-Packard. The judge in *Intel v. Atmel* emphasized that without this language, his decision would have been different:

> "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 would be free to use and/or resell the products. Such further use and sale is beyond the reach of the patent statutes."

The one precedent that supports Intel's position is a ruling in Intel's lawsuit against ULSI Systems Technology, in which Judge Helen Frye granted an injunction prohibiting ULSI from shipping its products. In this case, the judge did not accept that there was a sale from the foundry to ULSI, and she focused on the intent of the agreement between Intel and Hewlett-Packard, ULSI's foundry. She writes:

> "...it is clear 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. Since 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. Accordingly, the court concludes that Intel has shown that the Intel/Hewlett-Packard agreement does not provide ULSI with a license defense to this action."

ULSI appealed the injunction, and the Court of Appeals granted a stay of the injunction. In granting the stay, the Court of Appeals concluded that "a substantial legal question on the licensing issue exists," primarily because it was not clear to the court that sublicensing was the proper issue. Judge Frye apparently accepted Intel's claim that HP was providing a service to ULSI, not selling products to ULSI, so the exhaustion doctrine did not apply. Indeed, Judge Frye writes in a footnote:

> "Although the court need not reach this issue, the court also finds support for Intel's contention that its patent rights could not be extinguished by Hewlett-Packard's foundry services for ULSI because no sale took place. Pursuant to its agreement with ULSI, Hewlett-Packard was to provide foundry services for the US83C87 coprocessor. Hewlett-Packard never assumed any ownership rights in any ULSI product and had no right to use or sell any ULSI product. Therefore, no sale ever took place."

As illustrated in the preceding mix of opinions, the ULSI case has not yet established any clear precedent. The issue of whether or not the transfer of products from HP to ULSI constituted a sale was argued before the Court of Appeals in April, and a decision is now due. Intel claims that this decision will set a clear precedent, at the federal level, for interpreting the relationship between a foundry and the foundry's customer. Cyrix, on the other hand, notes that the specific facts of the ULSI case may be different from the Cyrix/SGS case, so the decision might not set a broadly applicable precedent.

Conclusions

The recent decision in *Intel v. Cyrix* covers only the first aspect of the litigation between the two companies. A jury trial is scheduled for January on the remaining issues, including whether Cyrix's coprocessor infringes the Palmer patent (and whether that patent is valid), whether damages are owed to Intel, and Cyrix's claim of anti-trust violations. (Damages may be due even though the chips fabricated by SGS-Thomson were ruled to be licensed, because early Cyrix chips were fabricated by TSMC.)

Eventually, the issue of whether a foundry sells chips or provides a service, for the purpose of patent exhaustion, is likely to end up before the Supreme Court. A final resolution could easily take until mid-decade. In the meantime, new patent cross-license agreements will surely be drafted to specifically exclude customer-owned designs, but this won't change the many agreements already in place.

Even if the courts ultimately rule, as Intel hopes, that patent exhaustion does not apply if there is no sale of the intellectual property, it seems that a modification of the agreement between the foundry and the customer could skirt the issue. It may be possible, for example, for the customer to sell the foundry the rights to the chip design, and then purchase the chips—including the intellectual property—back from the foundry. This may requiring giving the foundry the right to sell the chips to other customers, but with an appropriate royalty arrangement, this might not be a problem.

Assuming that the *Intel v. Cyrix* decision is upheld, the barrier represented by Intel's patent portfolio has been breached. (Note that Intel's patents have never been a barrier for AMD, which has an undisputed patent license; AMD's legal troubles stem from its copying of Intel's microcode.) For foundries such as SGS-Thomson, it is a windfall; they have found themselves in possession of an unexpectedly valuable license. While this surely seems unfair to Intel, it may ultimately be for the good of the industry: the use of licensed foundries appears to be the loophole through which the industry will be allowed to make the 386 architecture an open, industry standard, despite Intel's attempts to stop it.♦