

Mario Makes Millions for MIPS

Prospectus Reveals Nintendo Brings In 76% of MIPS Technologies' Revenue

by Jim Turley

As Silicon Graphics prepares to spin off its MIPS Technologies design department (see MPR 4/20/98, p. 1), the company's prospectus reveals a company that's heavily dependent on one customer. According to documents filed with the U.S. Securities and Exchange Commission (SEC), MIPS garnered 76% of its total 1997 revenue directly or indirectly from Nintendo—and its lead character, Mario—up from 67% the previous year. These statements paint a financial picture of a company whose success has been virtually subsidized by one customer, and whose future financial condition could be fundamentally altered if Nintendo fails to select MIPS for its next-generation game consoles.

Our analysis indicates that MIPS makes as much as \$10 from Nintendo for each game or system sold. Royalties on other MIPS processors run from \$1 to \$3 per device, and the company's contract revenue has shrunk from \$15 million to almost nothing in recent quarters.

Nintendo Royalty Changed MIPS Balance Sheet

MIPS Technologies has been riding a wave of good news for many months, celebrating one high-volume design win after another. The architecture appears in most, if not all, of the newest high-volume market segments, including handheld PCs, palm-sized PCs, networking equipment, printers, television set-top boxes, and video games. With 48 million units sold in 1997, MIPS was the best-selling 32-bit RISC architecture and second in total sales only to Motorola's indefatigable 68K dynasty (see MPR 1/26/98, p. 14).

MIPS is, along with Rambus and ARM, the archetype of a high-tech intellectual-property licensing company. As Figure 1 shows, the company's early income was heavily weighted toward development contracts, including licensing

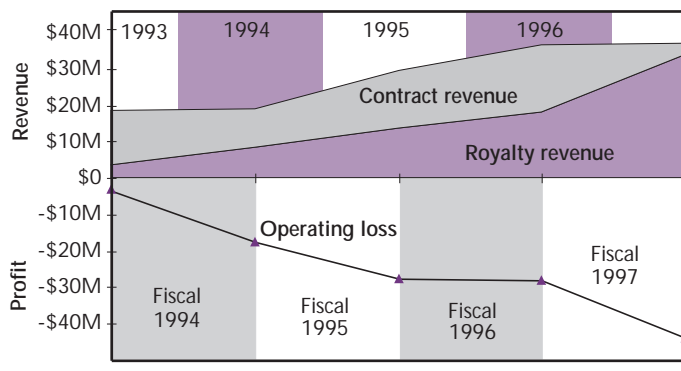


Figure 1. Data for the 1993 through 1997 fiscal years (which run from July to June) show that despite an increasing reliance on royalty income, MIPS Technologies has consistently lost millions of dollars per year for its parent, Silicon Graphics. (Source: SGI)

fees, nonrecurring expenses, and prepaid royalties. The price for acquiring a MIPS license can “range from several hundred thousand dollars for a single-use license to millions of dollars for an unlimited license ...,” according to the prospectus.

In fiscal years 1995 and 1996, MIPS's revenue was about evenly split between royalties (mostly from NEC) and nonrecurring expenses paid by Nintendo for development of both the VR4300 (see MPR 5/8/95, p. 1) and the Nintendo 64's graphics chip, which is based on SGI's Reality Coprocessor.

Starting in the fall of 1996 (the beginning of SGI's fiscal 1997), the picture changed drastically. As Figure 2 shows, MIPS's royalty stream skyrocketed, and its contract income fell to less than 10% of overall revenue. Not surprisingly, the biggest influx of royalty income came in 1Q97, the quarter following the Nintendo 64's first holiday selling season.

Nintendo Pays Off Three Ways

MIPS earns money from Nintendo in three ways. First, NEC pays a royalty to MIPS for each VR4300 chip it sells to Nintendo. This royalty is based on the VR4300's selling price rather than on a flat per-unit fee. Second, until the end of 1997, MIPS collected a per-unit royalty from Nintendo for its work on the system's graphics coprocessor. This royalty reached a contractual cap in 4Q97, which explains the nearly \$2 million dip in income at the end of that year. Finally, MIPS collects a royalty for each Nintendo 64 game cartridge, regardless of its manufacturer.

There appears to be no MIPS intellectual property embodied in the game software or cartridges; MIPS may have negotiated a game royalty simply as a way of sharing in Nintendo's success. Together, these direct fees accounted for 76% of MIPS's overall income in the last six months of 1997.

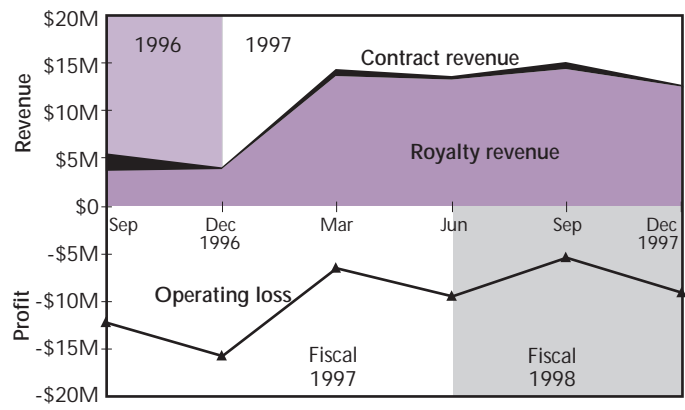


Figure 2. Over the most recent six quarters, MIPS Technologies' revenue has shifted to more than 90% royalties, primarily from Nintendo. (Source: SGI)

This proportion has almost certainly increased since then. Game players and software cartridges sell most briskly near the end of the year, and MIPS realizes the revenue in the following quarter, so the 1Q98 results are likely to show a huge upswing in Nintendo-related income, probably exceeding \$20 million and 90% of the company's total revenue.

As Figure 3 shows, the company has been increasingly dependent on Nintendo and, to a lesser extent, NEC for its income. Nintendo's direct contribution to MIPS's coffers has grown from 22% in fiscal 1996 to 76% in the last six months of 1997. NEC's contribution (which includes VR4300 sales) has been growing in dollar terms but shrinking as a percentage. MIPS's next-biggest source of revenue, LSI Logic, comes in a distant third, contributing 9% or less since mid-1994.

It's interesting that the Sony PlayStation—which is even more popular than the Nintendo 64, and which uses an LSI Logic MIPS chip—should generate so little revenue for MIPS. LSI did all the design work, and Sony does not pay MIPS on game sales, so LSI's MIPS-I license is the only source of income on that unit.

MIPS Royalty Averages About \$2 Per Chip

Our calculations place the average royalty on a MIPS processor at about \$1–\$3 per chip, based on the information contained in the prospectus. The company's nearly \$10 million windfall in the first quarter of 1997 suggests that MIPS collects about \$5 per cartridge from Nintendo. This is in addition to Nintendo's take from each title and part of the reason N64 games are more expensive than Sony or Sega titles.

The nearly \$2 million decline in the last quarter of 1997 suggests that Nintendo was paying \$1–\$5 per system before the royalty cap went into effect. It isn't publicly known how far into that quarter the payments were capped, so it's impossible to calculate precisely what the payment schedule was.

No Guarantee of Future Success

Unlike Sega (see MPR 6/1/98, p. 8), Nintendo has not announced plans for its next-generation system, and there's no guarantee the Japanese giant will anoint MIPS as its tech-

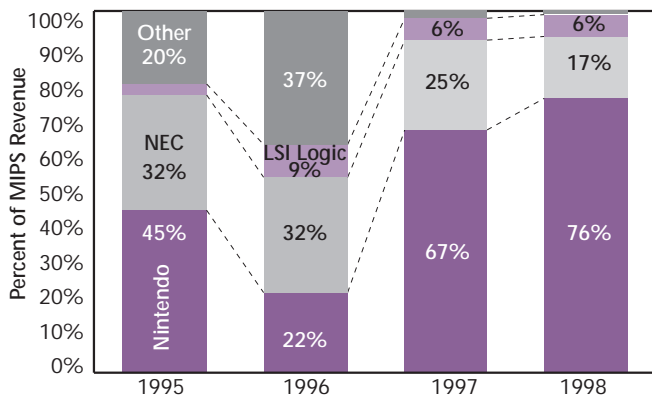


Figure 3. Nintendo and NEC together now account for more than 90% of MIPS Technologies' total revenue. (Source: SGI)

nology provider the second time around. The prospectus flatly states "... there can be no assurances that any of [MIPS Technologies'] microprocessor designs will be selected for design into future generation Nintendo products." In fact, MIPS is suing startup ArtX for, among other things, trying to steal the Nintendo business away from MIPS Technologies. If Nintendo should choose, say, PowerPC processors, MIPS's revenue picture would change drastically.

On the bright side, the employees at MIPS Technologies have little to do other than cash royalty checks averaging \$155,000 per day and make cappuccino. As an independent company, MIPS will again collect contract fees for any new design work, as it did for the Nintendo products. As long as the checks keep rolling in—which will probably continue for two years or more—MIPS Technologies has a cushion to cover its expenses for future development. The company predicts royalties from game cartridges will continue long after sales of the VR4300 to Nintendo have tapered off.

Should Nintendo choose to side with MIPS again, it may push hard for better terms. Knowing that it has the processor company's undivided attention, Nintendo may alter the agreement to something closer to the deal Sony has with LSI Logic.

Life After Mario Not So Bleak

Despite the rosy revenue picture, MIPS Technologies has perpetually lost money for Silicon Graphics. As Figure 1 shows, the chip-design department has cost the parent company anywhere from \$3 million to \$44 million per year to maintain. Losses for the most recent few quarters have averaged about \$3.2 million per month.

Much of this loss is artificial and due to SGI's accounting practices, which allocate all expenses from designing high-end workstation processors to MIPS while the revenue for workstation sales accrues to SGI.

As an independent company, MIPS will no longer be designing workstation processors; those employees who are (and their expenses) will stay with SGI. This reduction in headcount and the disproportionate decrease in expenses should help the new company stand on its own.

An independent MIPS will definitely be smaller. Many key employees have already left. Sandcraft, QED, ArtX, and Tensilica, for example, are all staffed or founded by former MIPS engineers. These startups have found—sooner than Silicon Graphics apparently did—that the future of MIPS lies in embedded systems and not workstations.

All other things being equal, if the Nintendo royalty stream dried up today, MIPS would still collect about \$1 million per month from chip sales from its other licensees. If the sales of, say, handheld or palm-sized PCs picks up, that number would increase. That's not a bad revenue stream for an intellectual property firm, but it would force massive layoffs and curtail development work. On its own, MIPS Technologies may be much smaller, but still profitable, with some very lucrative potential upside. 