Via Buys Centaur, Slashes Cyrix

Rushing headlong into the x86 processor business, Via Technologies has signed a letter of commitment to acquire the Centaur Technology operation from IDT. This announcement comes on the heels of Via's acquisition of Cyrix from National, giving it two different x86 product lines and design teams. Via will get Centaur's designs, design team, and patent portfolio. Terms have not been disclosed.

Just before announcing the Centaur deal, Via *(www.viatech.com)* and National reached a definitive agreement for Via to purchase Cyrix for $167 million, only part of which is being paid up front, with the remainder contingent on future Cyrix revenue. Via seems to have lost interest in maintaining much of the Cyrix organization; just after the definitive deal was announced (which will still take a month or so to formally close), National laid off 170 of Cyrix's 330 employees—people that Via apparently doesn't want to acquire. Even the 160 remaining employees don't seem to have any assurance of being hired; Via has said only that it will interview those people and decide which it will retain.

At Centaur, on the other hand, president Glenn Henry says he expects to retain all of his staff of about 60 people. Indeed, sources indicate that the layoffs at Cyrix include most of the team working on Mojave, Cyrix's next-generation processor based on the Jalapeno core. If this part indeed has been cut, the WinChip 4 and its successors from Centaur appear to be at the heart of Via's future plans. (A National spokesperson insisted that the commitment to Mojave was intact but said that the cuts have affected the schedule.) Samples of WinChip 4 are due this fall, with production in early 2000. Centaur is working on a Socket 370 version, code-named the C5, due to tape out later this year and on a next-generation core with an even deeper pipeline.

IDT has shipped WinChip 2 only in small quantities, due to production difficulties, and it has only sampled WinChip 3. Centaur has qualified the chips in Acer's fab as well as in IDT's, so it could continue production there. Whether Via continues marketing these products or drops them in favor of the more successful M II remains to be seen.

Sources indicate that Cyrix's Gobi—a Cayenne core with a Socket 370 interface and on-chip L2 cache—has slipped and may or may not make it to market, though some samples have been delivered to customers. If Via can ship Gobi this fall, it could make Centaur's C5 less interesting to Via—though sources indicate that the C5 die is dramatically smaller than Gobi's, making it attractive for its lower manufacturing cost. If Gobi slips much further, it may follow Mojave to the chopping block.

Via has some difficult waters to navigate, but one thing is clear: it is serious about being in the PC processor business. Via is the second-largest chip-set maker after Intel, and it shares the same parent (Formosa Plastics) as FIC, the second-largest motherboard maker after Intel. There seem to be all the makings for a strong play by the most powerful forces in Taiwan to control every component in the PC, enabling a new push toward ever-lower price points. —*M.S.*

Embedded DRAM Gives Bitboys an Edge

Bitboys, a Finnish graphics-hardware design firm, has announced a new 3D accelerator it hopes will propel it to the top ranks of 3D-gaming hardware vendors. The Glaze3D 1200 features 9 MBytes of embedded DRAM in four 128-bit banks plus four rendering pipelines in 1.5 million gates of logic on a 130-mm^2 die. The chip can fetch 1.2 gigatexels per second from its on-chip texture store and draw up to 600 million pixels per second into its on-chip frame buffer. This pixel-fill rate is nearly twice that of today's fastest 3D chips.

Bitboys *(www.bitboys.fi)* also offers a two-chip set called the Glaze3D 2400 that provides twice the memory and twice the performance of the 1200. The company plans to deliver a five-chip Glaze3D 4800 configuration later next year consisting of four Glaze3D 1200 chips plus "Thor," an unannounced geometry processor.

Bitboys expects to tape out the Glaze3D chip by September. Infineon, its foundry partner, hopes to have first silicon by December. This would be an unusually long fab cycle for a 3D chip, but it is typical of embedded-DRAM processes. Bitboys says it will ship its first products in 1Q00 if first silicon is fully functional. If not, the company faces long delays for each additional spin.

By the time Glaze3D ships, we expect to see next-generation products from current 3D-gaming market leaders 3Dfx and Nvidia. These competing products probably won't match the raw performance of the Glaze3D 2400 chip set, but they will certainly be less expensive to manufacture. If Bitboys can deliver the performance it promises, it's likely to achieve the desired success. —*P.N.G.*

Intel Sinks the 752

Citing a desire to focus on integrated graphics products, Intel announced it will not put its 752 discrete graphics chip into production. The chip, announced in conjunction with Intel's 810 integrated-graphics chip set (see MPR 5/10/99, p. 17), failed to receive even the modest OEM welcome Intel anticipated.

The 752, list-priced at $19.50, faced faster and more capable chips that ATI, Nvidia, and other companies sell for less than $10. Intel was planning to release a substantially faster discrete chip, code-named Capitola, later this year, but rumor has it that even this project is in jeopardy. Intel seems committed to the 810 and subsequent integrated core-logic products, but if it cannot also deliver competitive discrete graphics chips, it should reconsider its decision to develop the necessary graphics technology in-house. —*P.N.G.* M