



OBJECTIVE ANALYSIS

Semiconductor Market Research

OBJECTIVE ANALYSIS ALERT!

May 22, 2007

INTEL & ST CREATE NEW FLASH COMPANY

STMicroelectronics and Intel finally announced a joint venture that had been rumored for weeks. With Francisco Partners, a private equity firm, the two companies will create a new jointly-owned company in the second half that combines Intel's NOR business and ST's NAND and NOR businesses.

What they Said

- The new company will be owned 48.6% by ST, 45.1% by Intel, and 6.3% by Francisco Partners.
- ST will receive \$468M and Intel \$432M in addition to their equity stake for their flash businesses. Francisco will invest \$150M.
- The company will purchase both ST's NAND and NOR businesses, but only Intel's NOR business.
- The relationship with Hynix will continue, with the new company assuming ST's option to buy back their full 33% share in the Hynix/ST Wuxi JV fab. They intend to exercise this option as profits return to the company. (ST recently sold a portion of this back to Hynix leaving ST with only a 16.6% share.)
- Their hope is to see profits return by the first quarter of 2008.
- Loans have been arranged to total \$1.55B, partly for working capital, and in part to pay Intel & ST for their businesses.
- The firm will be incorporated in the Netherlands with headquarters in Switzerland.

What they DIDN'T Say

- How the business plans to go about manufacturing 300mm
- Any name for the new company.
- Whether Hynix would be used to manufacture NOR.

Observations

Intel's compensation for their assets is smaller than ST's although ST's flash business is smaller than Intel's. Last year ST sold only \$1.57B in combined NAND and NOR flash compared to our estimate of \$2.0B of Intel NOR revenues. ST's stock and cash compensation are both 8% higher than Intel's. When asked about this the companies stressed that this was a negotiated deal and that all parties were pleased with the results. All assets and "resources" were figured into the split, and the companies frequently mentioned their combined patent portfolio of 2,500 issued and 1,000 pending patents. This is likely to have been a key factor in determining this valuation, which was stated to be approximately \$3B.

ST's shuttered M6 facility in Catania will be part of the deal, giving the new company a shell into which they can put a badly-needed 300mm wafer fab. Neither ST nor Intel would project when the shell would be equipped – they only said that they expect synergies to generate cash hopefully starting in 1Q08, and that this would be used to invest in additional 300mm capacity. We can only guess that this new-found profitability would stem from scaling their products from 90nm to the current volume 65nm process, then to 45nm in the near future.

In response to investor questions about the rationale of Intel providing NAND through two entities, Intel replied that the new company's NAND will only be sold into the cell phone market and other embedded applications, and will be provided as stacked products (NAND/NOR, NAND/DRAM, etc). The new company will not enter the mass market for NAND.

ST frequently mentioned the importance of both companies' PRAM development efforts. It appears that they expect PRAM to start to become an important business sooner, rather than later, even though Intel mentioned that they are in volume production of 65nm NOR and already have working 45nm prototypes. (Incidentally: We have heard a rumor that Nokia is evaluating PRAMs, and these would most likely be from ST, Intel, and Samsung, all of whom appear to be sampling devices.)

What this means to the Industry

Spansion pulled ahead of Intel into a leading position in NOR in 1Q06, a position that it will have to yield to the new firm. Spansion plans to return to profitability via its migration to 45nm and its new SP1 300mm fab which has already started processing wafers and is expected to ship revenue units in the second half of this year. A 300mm fab usually gives about a 30% cost reduction over 200mm. So although Spansion may be losing its positions as both the first-ranked NOR manufacturer and the largest pure-play flash maker, the company is quite likely to be the first NOR maker to return to profitability. This will make it easier for Spansion to invest early and perhaps pull ahead of the new company. This will be an interesting race to watch.

Samsung has set a goal of becoming number one in NOR revenues by 2009 or 2010. Had ST and Intel remained separate entities this would have been easier – both companies were in the \$1.5-2.0B range in sales last year, and Spansion had \$2.6B in NOR revenues. With the new company already at a revenue level of \$3.6B, (most of which was NOR), Samsung will need to grow revenues by another \$1B to reach its first-place goal.

Hynix is in an enviable position, moving from a single flash partnership with ST to now having joint ventures with ST, Intel, and SanDisk, all in the space of a few months. Hynix will be managing the Wuxi China fabs and other manufacturing plants in a

relationship that should give it very large volumes that will help the company take advantage of economies of scale.

Intel and ST will be able to distance themselves from the difficulties posed by their NOR businesses in the past, yet they can profit from the larger scale of the operation and its narrowed focus. Once the new company becomes profitable these two will have the option of making a capital gain on sales of its stock.

OEMs will now have no second source for the products that Intel and ST introduced 2 years ago, under their agreement to second-source each others' NOR chips. This was a strategic initiative that will be a casualty of the deal. Other companies may use this to try and convert Intel/ST designs to their own products. The new company believes that their synergies in providing a complete solution will outweigh any disadvantages OEMs see in the lack of an alternate source.

Jim Handy
Objective Analysis
PO Box 440
Los Gatos, CA 95031-0440
USA
+1 (408) 356-2549
www.Objective-Analysis.com