

<http://www.reed-electronics.com/electronicnews/article/CA6350602?ref=nbra>

NAND Creeping into PCs, Semico Says

Staff Reporter -- *Electronic News*, 7/7/2006

NAND is poised to invade the PC, and users will hardly be aware, according to Phoenix, Ariz.-based Semico Research.

With the introduction of Microsoft's new Vista operating system and thanks to initiatives by component suppliers including Intel, Samsung, and others, NAND will start to be designed as a cache between the PC's hard drive and main memory, the market research firm noted.

Microsoft's new Vista operating system addresses certain Windows difficulties that until recently have not been perceived as important. In order to compete in the media server market, Microsoft finds that the system must wake up far faster than is possible with current versions of the Windows operating system. One of the many approaches Vista uses is a NAND cache on the HDD, or elsewhere in the system, to accelerate the HDD, Semico pointed out.

This one technology goes by several names: ReadyDrive, Hybrid Hard Drive (which was known by the code name "Piton" before it was announced), Robson, and External Memory Device (EMD), and relates to SuperFetch, ReadyBoost, and InstantON.

All of these are names for ways that Microsoft's new Vista operating system will use NAND as a cache between DRAM and the HDD.

"This design provides certain compelling benefits, including faster response times, lower power consumption and improved HDD reliability," explained Jim Handy, Semico's director of nonvolatile memory services, in a statement.

"But these benefits are more important to the OEM than they will be to end users. Semico anticipates OEMs to drive rapid adoption of NAND caches, whether in the HDD or on the PC's main board," he continued.

Semico also found that this design provides other compelling benefits including lower power consumption and improved HDD reliability, which are important to the OEM.

Further, Semico anticipates rapid adoption of NAND caches, whether in the HDD or on the PC's main board, but does not expect a significant increase in USB flash drive usage to answer this same need.

As a result, OEMs and HDD manufacturers are likely to gravitate towards the lowest-cost NAND chip they can get away with, and consumers are unlikely to ask for large caches.

Finally, the firm believes that this strong growth, tempered by low ASPs, will result in a market that will grow from nothing this year to \$264 million in NAND by 2011.