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Samsung Stretches Flash Memory for Mobile PCs

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Although the Samsung solid state drive technology is in its early development stages, it may prove a timely advance as more ultra-portable, 7-inch-screen type devices are sold, IC Insights Vice President of Market Research Brian Matus told TechNewsWorld.

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Samsung says it has begun offering a 32 gigabyte NAND flash solid state disk (SSD) drive, a development the South Korean company calls a "historic milestone" for flash memory as it enters the mass market for notebook PCs, which today rely on hard disk drive (HDD) technology.

Samsung announced the new flash-based solid state drive at the Mobile Solution Forum in Taiwan, indicating it would eliminate the moving parts of HDDs and deliver noise and power consumption advantages in addition to more rugged PC memory.

However, the price of flash memory remains prohibitively expensive compared to widely-used HDD technology, which continues to advance and drop in price at the same time, industry analysts agreed.

"This shows they can do something that is always going to cost more than the hard disk drive," Semico Research Analyst Jim Handy told TechNewsWorld.

Solid State Strength

Samsung, nonetheless, said it sees the solid state disk memory market growing from US\$540 million this year to \$4.5 billion by 2010.

The company highlighted several features -- instantly accessible, non-moving NAND flash memory that weighs less, reads and writes faster, uses less power and is noiseless -- ideal for notebooks and other mobile computers.

Calling commercialization of its technology the first time NAND flash has been applied to mobile computing, Samsung said the move to more flash will be facilitated by more production and dropping prices.

Cost Comparison

The technology has promise, analysts agreed, but they doubted its competitiveness for notebook PCs at this time based on price.

Handy pointed out that the power and performance gains of flash memory compared to HDD cannot cancel out the cost difference.

While such larger flash solutions are already offered and used in some specific applications -- such as military or industrial control where reliability is paramount and conditions may be harsh -- today's common operating systems are not designed to take advantage of a flash drive, Handy added.

He indicated, however, that Microsoft's (Nasdaq: MSFT) forthcoming Vista operating system and Intel's (Nasdaq: INTC) Robson technology may take more advantage of flash memory.

Less Breakable

Although the current price of the NAND flash memory is unfavorable compared to HDDs and there are still performance and capacity questions, the flash alternative remains attractive in the industry, according to Endpoint Technologies Associates Founder and President Roger Kay.

"The idea of solid state storage is very exciting because there are a lot of advantages," Kay told TechNewsWorld, citing lower power requirements and use, and "less breakability."

The technology is definitely promising, but it is not yet mature or ready for the market, he added.

Meaningful Demonstration

Although the Samsung solid state drive technology is in its early development stages, it may prove a timely advance as more ultra-portable, 7-inch-screen type devices are sold, IC Insights Vice President of Market Research Brian Matus told TechNewsWorld.

"It's more of a demonstration," he said. "But then again, five years ago, flash MP3 players were really only a concept, and it may be like that."

Matus said with more capacity and density and lower prices, the idea of flash drives for mobile computing may catch on similar to the way it did for media players.

"This opens the door and at least shows it can be done," he said.