

Freescall ready to sell MRAM on a commercial scale

INDUSTRY FIRST: The company said it already had customers for the new memory technology, and would license its patents to other firms

AP, DALLAS

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Achieving a long-sought goal of the US\$48 billion memory chip industry, Freescale Semiconductor Inc announced the commercial availability of a chip that combines traditional memory's endurance with a hard drive's ability to keep data while powered down.

The chips, called magnetoresistive random-access memory or MRAM, maintain information by relying on magnetic properties rather than an electrical charge. Unlike flash memory, which also can keep data without power, MRAM is fast to read and write bits, and does not degrade over time.

Freescale, which was spun off of Motorola Inc in July 2004, said yesterday it had been producing the 4-megabit MRAM chips at an Arizona factory for two months to build inventory. A number of chip makers have been pursuing the technology for a decade or more, including IBM Corp.

Sometimes referred to as "universal" memory, MRAM could displace a number of chips found in every electronic device, from PCs, cellphones, music players and cameras to the computing components of kitchen appliances, cars and airplanes.

"This is the most significant memory introduction in this decade," said Will Strauss, an analyst with research firm Forward Concepts. "This is radically new technology. People have been dabbling in this for years, but nobody has been able to make it in volume."

Static and dynamic random access memory chips, used in PCs and elsewhere, are fast but lose data when the power is switched off. Flash memory chips, which are commonly found in music players, cameras and cellphones, retain information but are slower and degrade over time.

Bob Merritt, an analyst with Semico Research, said that memory makers were hunting technology that would be faster, smaller, cheaper and retain data when the power is off to help run portable computers and cellphones.

"The older memory technologies are awkward to work with in a mobile computing environment," Merritt said. "This is a significant step forward and absolutely critical for moving into the smaller forms that consumers and industry want."

Ultimately, the technology could displace the RAM found in PCs, enabling systems that boot up immediately because data don't have to be reloaded into the memory chips.

Freescale has been working on the technology for nearly a decade, said Saied Tehrani, who directs the Austin-based company's MRAM program.

He said Freescale already had customers, but declined to name any.

Freescale said it was not interested in high-volume markets but would license its patents to other companies.