

Nanotech memory company poised to profit in billion dollar markets

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"Nanomech is a new non-volatile memory technology which is completely different to the existing one," explains Dr Mike Beunder, CEO of Cavendish Kinetics. "The existing technology involves storing charge whereas ours operates mechanically like a switch."

Cavendish Kinetics develops nanotechnology-based non-volatile memory. To support this activity, Cavendish Kinetics has developed its own patent-protected range of Nanomech embedded non-volatile memory products.

Nanomech, using standard CMOS process technology, enables the implementation of unique memory storage devices with ultra low-power, high speed read/write characteristics that function fully up to 200°C and are completely insensitive to radiation. Compared to current technology, Nanomech storage devices offer 200 times better write performance while consuming 50 to 100 times less power.

Cavendish Kinetics currently offers three embedded non-volatile memory products, an electrically programmable Fuse (eFuse), an embedded One-Time-Programmable (eOTP) memory product, and an embedded multi-time programmable (eMTP) memory product.

"Cavendish Kinetics is a spin-off from Cavendish Laboratory at Cambridge University," mentions Beunder, "and the company's founder and CTO, Dr Charles Smith, is still a Reader at the Laboratory." When Smith established Cavendish Kinetics in 1994, Cambridge University transferred ownership of its nanotech non-volatile memory patents to the

company in exchange for stock.

Beunder believes the target market for the new memory technology to be worth \$4.75bn and will grow to \$6bn by 2008. Potential applications for the Nanomech storage devices include micro-controllers, RFID and smartcards used in the mobile, automotive, space, defence and medical sectors. To help enter these markets, the company recently opened a US sales office in Silicon Valley.

The company is currently seeking about \$10m in second round VC investment in order to establish a worldwide marketing and sales organisation as well as to finance the further development of eOTP and eMTP. Attracting new investment is a key activity for Beunder and he recently seized the opportunity to present his company's business plan to investors at the European Tech Investment Forum in London, one of Europe's leading events for ICT entrepreneurs and investors.

Cavendish Kinetics is currently working on the 4.68m euro PROMENADE IST project, which involves seven partners including Bosch and IMEC. The project is developing a process management and design system for microsystem technologies. The computer system will enable process engineers to simulate and optimise silicon-based thin film processes and help designers to understand technological constraints when designing microsystems for manufacture. Cavendish Kinetics is responsible for integrating its in-house management and tracking system for CMOS process developments into the PROMENADE system.

The company was also involved in the EUREKA-funded MESCI-I project, which integrated MEMS nanoswitches in mainstream CMOS processes and helped to advance the firm's Nanomech technology. "The MESCI-I project was regarded as so successful," announces Beunder proudly, "that we have just won the LYNX Award for 2005 from the EUREKA programme."

Source: IST Results

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