



Grandis Inc., 1123 Cadillac Court, Milpitas CA 95035

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## PRESS RELEASE

### For Immediate Release:

### **GRANDIS AWARDED PRESTIGIOUS DARPA CONTRACT BY DEPARTMENT OF DEFENSE TO DEVELOP STT-RAM (SPIN TRANSFER TORQUE RANDOM ACCESS MEMORY)**

**MILPITAS, Calif., Oct. 28, 2008** — Grandis, Inc., today announced that it has been awarded \$6.0 million from the Defense Advanced Research Projects Agency (DARPA) for the initial phase of research to develop spin-transfer torque random access memory (STT-RAM) chips. STT-RAM is a next-generation, solid-state memory technology that is dense, fast, non-volatile and radiation-hard, making it ideally suited for defense applications. The total value of the effort, if all phases of the development program are completed, could be up to \$14.7 million over four years.

The program will be carried out by a world-class collaboration between Grandis and the Universities of Virginia and Alabama. Under the direction of Principal Investigator Dr. Eugene Chen of Grandis, development work will cover STT materials and processes, STT architecture and circuit blocks, and ultimately test and verification of STT-RAM integrated memory arrays. Professor Stuart A. Wolf of the University of Virginia and Professor William H. Butler of the University of Alabama are both noted for their substantial contributions to the development of the field of spintronics, and their extensive research capabilities in fundamental physics, first-principles modeling and combinatorial materials science will complement the efforts at Grandis in this program.

“We are extremely pleased that STT-RAM has been recognized by major semiconductor companies as the leading memory solution for the 45 nm technology node and beyond, and we are honored by this additional recognition and significant funding from DARPA”, stated Farhad Tabrizi, CEO and President of Grandis. “Grandis and its partners are committed to making STT-RAM technology available to DARPA’s defense contractors, and believe that this program will provide leading-edge innovations that strengthen U.S. leadership in this critical technology.”

“The goal of this program is to deliver dense, high-performance, cost-effective universal memory chips employing STT technology”, explained Dr. Devanand Shenoy, program manager in DARPA’s Microsystems Technology Office. “Demanding specifications must be met by the materials and devices throughout the project to ensure delivery of ground-breaking technology.”



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Grandis has been the world leader in the development of STT-RAM, which is also known as STT-MRAM or SpinRAM, since 2002. It has pioneered the development of innovative materials and structures to enhance spin-transfer efficiency and reduce STT write current while maintaining thermal stability. It has established a comprehensive patent portfolio in spintronics and STT-RAM technology and a strong technical team with extensive expertise in magnetic thin film and semiconductor memory technology. The successful outcome of this DARPA program will lead to a revolution in military and space electronics by delivering sophisticated solid-state memory devices for mission-critical applications.

### **About Grandis, Inc.**

Grandis is the pioneer in the development of spin-transfer torque RAM (STT-RAM), a universal and scalable memory solution. Grandis licenses its technology to companies that are developing a variety of products incorporating stand-alone and embedded STT-RAM memory. It offers its licensees a complete range of support services from process installation through qualification. By combining non-volatility and high performance with low-power consumption and low cost, STT-RAM can revolutionize the performance of electronic products in many areas. Grandis was established in 2002, and is headquartered in Silicon Valley, California. Investors include Applied Ventures LLC, Sevin Rosen Funds, Matrix Partners, Incubic and Concept Ventures. Additional information about the company is available on the Internet at [www.grandisinc.com](http://www.grandisinc.com)

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