



Applied Materials' Quantum LEAP System in Demand As the Industry Moves to New Chip Designs

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Lucent Technologies Selects Quantum Implant System for Fabricating

Advanced Communications Semiconductors

Applied Materials, Inc., the world's leading supplier of high current ion implanters, has shipped multiple Quantum LEAP(tm) (Low Energy Advanced Processing) ion implantation systems to customers in the U.S., Europe, Taiwan and Singapore since its introduction in July 1999. One of the first Quantum(tm) systems was shipped to Lucent Technologies' Cirent Semiconductor facility in Orlando, Florida, for the formation of advanced transistor structures in its next-generation communications semiconductors.

"Lucent is at the forefront of low-power, advanced communications chip technology," noted Craig Lowrie, vice president and general manager of Applied Materials' Implant Division. "We have been working with them for years in many aspects of implant technology, including LEAP applications, and we are pleased that they have chosen the new Quantum system."

The new Quantum ion implantation system uses a new, small footprint platform that bridges 200mm and 300mm wafer sizes. High throughput and productivity are possible at low energies down to 200eV -- a requirement for the critical implants used in 0.18 micron and below devices. The Quantum system's extremely short beam path minimizes beam "blow up" and energy contamination, with new technology that ensures energy accuracy and control for ultra-low energy implants to +/-0.5%. Quantum implanters are currently available in three models: the Quantum LEAP technology, which offers an ultra-low energy range of 200eV to 80keV; the Quantum 80, which covers a range of 2keV to 80keV; and the Quantum 120, which performs at an extended upper energy range to 120keV.

"Customers are selecting the Quantum LEAP system for its flexibility and reliability," said Jonathan Pickering, business development director of Applied Materials' Implant Division. "The Quantum's productivity at very low energies, as well as traditional energies, enables high utilization at current and future implant requirements. We have run several marathon tests for customers demonstrating Quantum's capability in a simulated production environment which have resulted in new orders for the system."

According to market research firm Dataquest, the market for high current ion implant systems is projected to be \$249 million in 1999 and is expected to grow to \$536 million by 2004, for a compound annual growth rate (1998-2004) of 16.5 percent.

Cirent Semiconductor is a manufacturing division of Lucent Technologies' (NYSE: LU) Microelectronics Group. Created in October 1995, the company enhances Lucent's ability to meet the worldwide demand for advanced integrated circuits, which are used increasingly in products such as communications and computing equipment, and networking products. The Orlando, Florida, facility is the largest manufacturer of semiconductor devices in the southeast. Bell Labs' semiconductor process development laboratories are located on the Cirent Semiconductor campus.

Applied Materials, Inc. is a Fortune 500 global growth company and the world's largest supplier of wafer fabrication systems and services to the global semiconductor industry. Applied Materials is traded on the Nasdaq National Market System under the symbol "AMAT." Applied Materials' web site is www.appliedmaterials.com.

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