

## **Future of Network Computing**

July 30 2004

The top minds at Sun Microsystems Inc. (Nasdaq: SUNW) presented a rare display of innovations from supercomputing, sensor technology and next-generation storage to security, speech recognition and advanced search during Sun Microsystems Laboratories (Sun Labs) Open House yesterday, hosted by the Computer History Museum in Mountain View, Calif.

The event featured talks by 10 of Sun's leading research scientists andmore than 40 technology demonstrations for customers, partners, media and analysts. It provided attendees with the chance to learn more about new, innovative technologies developed at Sun Labs and by members of AdvancedDevelopment teams from across the company.

Established in 1991, Sun Labs' charter is to pioneer advanced technologiesthat solve difficult problems for customers and transfer them to Sun's core product units. Today, the research organization is one of the company's most prized assets as it continues to break barriers and develop new technologies in computing, silicon design, software and networks for business and entertainment applications. Sun Labs' researchers have contributed to more than 12 percent of Sun's patents and this R&D work has generated more than \$2 billion in revenue from projects that have transferred to product units.

"Sun Labs has played a major role in many landmark innovations in technology and product improvements, including Java(TM) technology, SPARC(R) and Solaris(TM) OS," said Glenn Edens, senior vice president and director of Sun Labs. "We felt it was time to let people see



and meet some of the brilliant people and projects inside Sun Labs."

One of the highlights of the Open House was Sun's High Productivity Computing (HPCS) project focused on developing the architecture for next-generation supercomputers. Partially funded by a \$50 million award from the Defense Advanced Research Projects Agency (DARPA) of the U.S. Department of Defense, the HPCS project has already yielded a breakthrough in silicon design with the potential to move data at 60 to 100 times as fast as current top speeds.

Some of the other featured projects showcased during the Open House included:

Project Jupiter: Next-generation media and entertainment products and technologies for the delivery, management, storage, playout and accounting of digital content for interactive television (iTV) and video on demand (VOD).

Continuous System Telemetry Harness: A new software tool for Sun's high-end and midrange systems that provides an "EKG system for servers" to help protect data centers and increase availability.

Project Mackinac: Sun's implementation of the Real-Time Specification for Java technology, JSR-01, beyond its deployment in the ground-side control system for the mission to Mars for real-world control applications such as fossil fuel plants and airplanes.

Java Technology for Games: Open source Java technologies that make it fast and easy for independent game developers to create high-performance, state of the art games on the Java platform.

Sun Java System RFID Software: This standards-based software simplifies integration of RFID data into enterprise information systems,



reducing the complexity of managing massive amounts of data.

Since taking the helm last fall, Edens has accelerated Sun Labs' focus on research that leads to new product opportunities for Sun, including customer pilot projects to test new technologies and approaches. One important new initiative is the creation of "micro-business units," which address new market opportunities, and focus projects which generate small, but significant amounts of revenue for the company.

"Smart innovation involves research projects that revolutionize technology and drive revenue for Sun," Edens said. "With the quality of Sun Labs' talent, those are achievable objectives."

With an extensive background as a researcher, entrepreneur, corporate strategist and consultant in telecommunications, entertainment and computer technology design, Glenn Edens manages research and development at all three Sun Labs locations in Mountain View, Calif., Burlington, Mass., and Grenoble, France.

In 1979, Glenn co-founded Grid Systems Corporation, the company that developed the first laptop computer. He also founded WaveFrame Corporation, which developed the first all-digital audio workstations for the motion picture, television and recording industries. From 1992-1998, Glenn was at Interval Research Corporation in Palo Alto, managing research and the transfer of research results into external product companies. He has also held positions at Hewlett-Packard, NBI, Apple Computer, National Semiconductor and Xerox Corporation.

Citation: Future of Network Computing (2004, July 30) retrieved 17 April 2024 from <a href="https://phys.org/news/2004-07-future-network.html">https://phys.org/news/2004-07-future-network.html</a>

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