

#073

**EMBARGOED NEWS UNTIL 9 A.M., JUNE 28**

Contact: Denize Springer  
(415) 405-3803, (415) 338-1665, [denize@sfsu.edu](mailto:denize@sfsu.edu)

## **SFSU's unique collaboration with tech industry wins JavaOne award** *New wireless technology reveals ocean conditions at the touch of a button*

SAN FRANCISCO, June 28, 2005 — San Francisco State University and Silicon Valley leaders, Agilent Technologies and Sun Microsystems, have teamed up on a project that will improve the way critical environmental data is collected, stored, used and distributed. The team of computer scientists, engineers and oceanographers has developed a sensor-based system to monitor and transmit information about ocean conditions via cell phone to other wireless networks. The technology provides a secure integration and dissemination of information that could be applied to a variety of urgent needs ranging from earthquake and tsunami detection to homeland security.

The innovation, dubbed NetBEAMS (Networked Bay Environmental Assessment Monitoring Systems), was one of the projects introduced at Sun Microsystems' annual JavaOne conference in San Francisco this week. Earlier today, Sun CEO Scott McNealy presented the NetBEAMS team with a Duke's Choice Award. Named after the Java technology mascot, Duke, the award recognizes innovation and the exceptional use of Java technology.

NetBEAMS gathers information from a network of sensors placed in different parts of the San Francisco Bay. It then transmits data such as water depth, temperature, salt content and algae growth via cell phone to a database that uploads the information to the Web. Fishermen, environmental scientists and others who may need up-to-the-minute information about ocean conditions can pick up the real time data by visiting [www.NetBEAMS.org](http://www.NetBEAMS.org).

"The NetBEAMS project highlights the advantages of sharing technology, information and communities," says Juan Carlos Soto, vice president of software at Sun Microsystems. "Hosted on java.net, this innovative open-source project brings together industry players from Sun and Agilent with San Francisco State University and its Romberg Tiburon Center for Environmental Studies. The teams are collaborating to build a Java and JXTA-based sensor network that makes real-time information about the San Francisco Bay water conditions freely accessible to everyone."

In addition to Sun's Java programming language and networking platforms, NetBEAMS uses the results of Agilent Laboratories' research in measurement information services and cellular monitoring infrastructure to enable the sensors to collect and forward oceanographic data. Sun and Agilent are part of the Java Distributed Data Acquisition and Control (JDDAC) community, which provides key, common open-source components and adaptors that enable Java networks to seamlessly "plug and play"

**-more-**

transducers of many kinds without error or confusion.

“NetBEAMS measurement research will enable — for the first time — large-scale environmental monitoring of changing conditions that impact the quality of San Francisco Bay,” said Darlene J.S. Solomon, vice president and director of Agilent Laboratories. “Monitoring large ecological systems with today’s technology is much like the adage of three blindfolded people trying to understand an elephant by touching just the tail, trunk and leg. This new technology has the potential to put into place a much more pervasive measurement capability, allowing us to get access to details and understanding that is not possible today.”

This project was made possible by a grant from Agilent Technologies and in-kind support from Sun Microsystems. Collaborators included Sun and Agilent researchers, many of whom volunteered their time and expertise, and faculty, researchers and graduate students from SFSU’s Romberg Tiburon Center for Environmental Studies, Computer Science, Geosciences and Electrical Engineering Departments. A model of the system, which is designed for deployment in any marine environment, is operating in the San Francisco Bay near the shoreline of the Romberg Tiburon Center in Marin County.

“This isn’t simply a case of industry providing support to higher education,” said Professor Dragutin Petkovic, chair of the SFSU Computer Science Department. “I believe that this project points to a new model for the way computer science can be taught. The stimulating, true collaboration between industry and higher education using open source software can produce great advances and will excite students about choosing careers in computer science.”

NetBEAMS is a project of SFSU’s new Center for Computing for Life Sciences (CCLS), which provides an environment for faculty and students to integrate study and research between the life sciences and computational sciences. Researchers and students in the Biology, Biochemistry, Geosciences, Computer Science, Mathematics and Physics Departments are currently collaborating on a number of projects including the collection/dissemination of genomic information and the visual data modeling, real time monitoring and recording of functioning organisms. For details about the Center for Computing for Life Sciences visit [www.cs.sfsu.edu/ccls/](http://www.cs.sfsu.edu/ccls/)

###

For details about NetBEAMS computer science contact Dragutin Petkovic, chair, SFSU Computer Science Department, (415) 338-1008, [dpetkovic@cs.sfsu.edu](mailto:dpetkovic@cs.sfsu.edu), or visit [www.cs.sfsu.edu](http://www.cs.sfsu.edu).

For details about the environmental science involved contact Toby Garfield, geosciences professor at the Romberg Tiburon Center for Environmental Studies, (415) 338-3713, [garfield@sfsu.edu](mailto:garfield@sfsu.edu) or visit [www.rtc.sfsu.edu](http://www.rtc.sfsu.edu).

For details about Agilent Technologies contact Albert Lin, Weber Shandwick, at (408) 530-8400, ext 2228, [alin@webershandwick.com](mailto:alin@webershandwick.com) or visit [www.agilent.com](http://www.agilent.com).

For details about Java or Sun Microsystems contact Carrie Kasten, (347) 534-2093, [carrie.kasten@sun.com](mailto:carrie.kasten@sun.com).