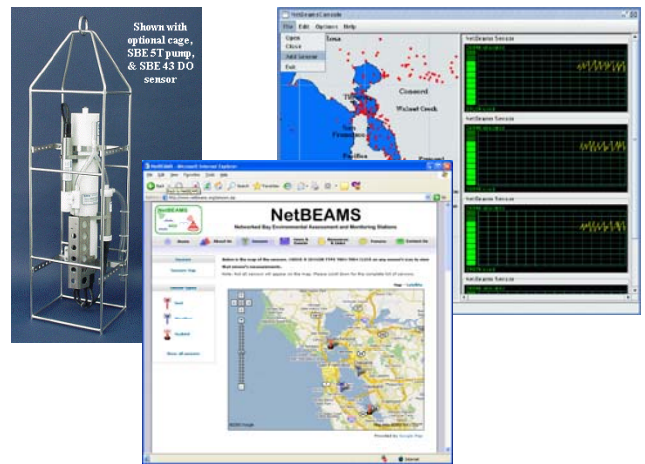
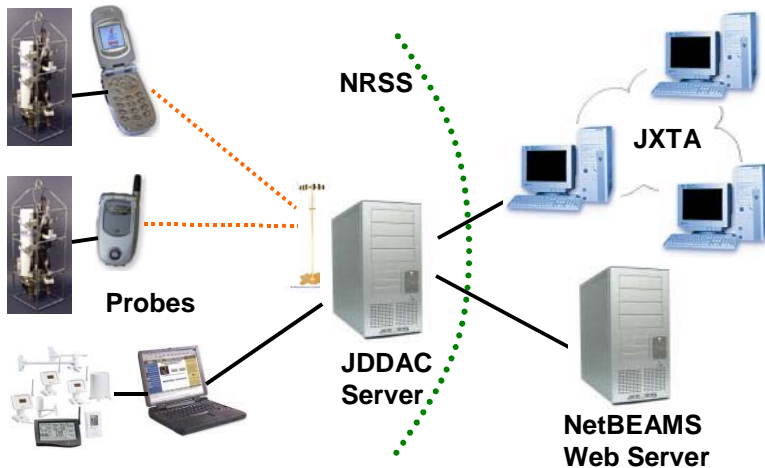


Networked Bay Environmental Assessment and Monitoring Stations



<http://www.netbeams.org>



Overview

NetBEAMS gathers information from a network of sensors placed in different parts of the San Francisco Bay and transmits pertinent water quality and environmental data (including temperature, pressure, salinity, and turbidity) using cell phones to measurement servers, which in turn makes the data available on the Internet via various means including the Web and JXTA.

NetBEAMS significantly expands the reach of existing measurement systems, which are tethered dockside, to allow deployment at remote locations and offshore. Fishermen, environmental scientists, and others who may need up-to-the-minute information about changing conditions can retrieve real time information by visiting the project web site.

NetBEAMS is built with the Java™ programming language and environments, on top of the **JDDAC** sensor network platform. JXTA™ is used to federate measurement data from different data sources.

Contributions

"NetBEAMS measurement research will enable - for the first time - large scale environmental monitoring of changing conditions that impact the quality of the San Francisco Bay," said Darlene J.S. Solomon, Ph.D., vice president and director of Agilent Laboratories.

"Monitoring large ecological systems with today's technology is much like the adage of three blind people trying to understand an elephant by touching just the tail, trunk and leg. This new technology has the potential for putting into place a much more pervasive measurement

capability, allowing us to get access to details and understanding that are not possible today."

Community

NetBEAMS was supported by a grant from Agilent Technologies and in-kind support from Sun Microsystems. Collaborators included Sun and Agilent computer scientists, as well as faculty, researchers, and graduate students from San Francisco State University's Romberg Tiburon Center for Environmental Studies, Computer Science, and Electrical Engineering departments.

"This isn't simply a case of industry providing funding 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."

To find out more...

- <http://www.netbeams.org> - Real time measurement data on Bay conditions, sensor maps, project descriptions, news and events.
- <http://jxta.org> - JXTA™ technology is a set of open protocols that allow any connected device on the network, ranging from cell phones to servers, to collaborate in a P2P manner.
- <http://jddac.dev.java.net> - JDDAC project site.