

the foresight and governance project presents

High-Tech Tools for Water Resources

How Smart Sensors Can Help Us Protect the Environment

Friday, February 23, 2007 • 9:30 A.M. — 11:00 A.M.
6th Floor Moynihan Board Room • Woodrow Wilson Center

Place a battery-powered environmental sensor in a threatened environment. Wait as it finds and connects wirelessly to its neighbors. Allow it to move automatically to the most degraded locations. Receive processed data on your Blackberry. Imagine when prices for this technology fall to the point where it can be used routinely to observe changes in our environment. How could you use such a system to monitor, assess, and respond to today's pressing environmental challenges?

Electronic sensors are ubiquitous in everyday life. Modern sensors are smaller, less obtrusive, and more versatile than ever before, finding their way into everything from satellites to cellular phones. Recent advances in electrical engineering, computer science, and wireless technology have made sensors small and rugged enough to be installed directly in the natural and built environment and yet capable enough to process and transmit data in real-time to a final destination. Such distributed networked sensing systems allow unobtrusive, real-time monitoring of a wide variety of environmental phenomena across a wide range of geographic areas—an ecosystem, a watershed, or a municipality's sewage system, for example.



One of the most promising areas to apply new sensing technology is in water resources. Please join us for the release of a new report, *Distributed Sensing Systems for Water Quality Assessment and Management*, commissioned by the Foresight and Governance Project at the Woodrow Wilson International Center for Scholars under a cooperative agreement with the Environmental Protection Agency's Office of Water. Authored by scientists and engineers at the Center for Embedded Networked Sensing (CENS) at the University of California Los Angeles (UCLA), this paper describes the technological state of the art and examines the potential for using distributed sensing systems to improve the management of critical water resources. The paper also outlines recommendations for further research to advance the development and use of these systems by environmental resource managers.

featuring

Deborah Estrin, Director, CENS and Professor of Computer Science, UCLA
Thomas C. Harmon, Professor of Environmental Engineering, UC Merced
Jeffrey Goldman, Director of Program Development, CENS, UCLA

moderator

Robert Olson, Senior Fellow, the Institute for Alternative Futures



Hard copies of the report will be available at the event.

The event will be webcast LIVE at www.wilsoncenter.org/foresight. No RSVP necessary for the webcast.

PLEASE RSVP • Acceptances to foresight@wilsoncenter.org. Please include "RSVP Sensors" in the subject line of your email.

Directions to the Wilson Center are available at <http://www.wilsoncenter.org/directions>