NCAR NEWS TIP SHEET

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Dear media representative:

Attached is a press release announcing the winners of the prestigious Computerworld Smithsonian Award, a national award for breakthroughs in computer science. The winners are Robert Chervin, a current staff member at the National Center for Atmospheric Research in Boulder and Albert Semtner, Jr., a former NCAR employee now at the Naval Postgraduate School in Monterey, California.

For more information, please contact NCAR Media Relations office: Anatta (303-497-8604) today through Monday, May 17, or Joan Frisch (303-497-8607) after Monday.

The Computerworld
Smithsonian Awards

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FOR IMMEDIATE RELEASE

COMPUTERWORLD SMITHSONIAN AWARD FOR BREAKTHROUGH COMPUTATIONAL SCIENCE WON BY GLOBAL CLIMATE RESEARCHERS

Cray Research-Sponsored Award Goes To Drs. Robert Chervin And Albert Semtner For Pioneering Use Of Supercomputer To Understand The World Ocean

CAMBRIDGE, MA, May 13, 1993--The 1993 *Computerworld* Smithsonian Award (CWSA) for Breakthrough Computational Science has been won by Dr. Robert Chervin of the National Center for Atmospheric Research, Boulder, CO., and Dr. Albert Semtner, Jr. of the Naval Postgraduate School, Monterey, CA., for their pioneering work using a supercomputer to understand the world ocean and its profound influence on climate and climate change.

The prestigious award, new this year to the CWSA Program, is sponsored by Cray Research, Inc., Eagan, MN., and will be presented to the two researchers at the Fifth Annual CWSA Dinner at the National Building Museum in Washington, D.C. on June 7, 1993. The winner's work will become part of the Smithsonian Institution's permanent technology exhibit, *The Information Age*, at the National Museum of American History.

Drs. Semtner and Chervin won the award for their use of a supercomputer to calculate, for the first time, the powerful effects of small-scale currents called "ocean eddies" in the global climate system. Researchers have long sought a way to include the

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effects of these complex eddies in order to make more accurate climate predictions. "The ocean is as important as the atmosphere in governing climate, but so little is known about the ocean that it remains as a final frontier," said the two scientists in a written summary of their work.

"Computational science--using computers to gain new insights--has become a new third branch of the scientific method in many fields, alongside traditional theory and experimentation," said Cray Research Chairman and CEO John F. Carlson. "The pioneering work of Drs. Chervin and Semtner is an important step forward in our ability to study our global climate and environment."

Dr. Semtner is a Professor of Oceanography at the Naval Postgraduate School. From 1976 to 1986, he was a scientist in the oceanography and climate sections at the National Center for Atmospheric Research (NCAR). A 1963 graduate of the California Institute of Technology, Dr. Semtner earned a doctorate in geophysical fluid dynamics from Princeton University in 1973.

Dr. Chervin is a research scientist in NCAR's Climate Sensitivity and Carbon Dioxide Research Group, Climate and Global Dynamics Division. He received his undergraduate and doctoral degrees in electrical engineering and plasma physics from Columbia University, in 1965 and 1971, respectively.

The Cray Research Information Technology Leadership Award for Breakthrough Computational Science is given annually to an individual or a team that has best used supercomputer-level computational science to: significantly increase the possibilities for improvement in the human condition; solve, or make notable progress on, a previously intractable problem; set new, replicable standards for scientific endeavor; and create new technological tools with which to effect change. Winners must display vision, foresight and the courage of their convictions, determination to solve a significant, previously unsolvable problem and the intelligence and will to overcome insurmountable obstacles to achieve their goal.

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The nominating committee for the Award included high-level representatives of government, university and commercial organizations from the U.S. and abroad. This year's nominees represented research fields as diverse as molecular research, the dynamics of fluids, chemical simulation and the physics of turbulence.

The *Computerworld* Smithsonian Awards Program, established in 1989, was created to search out and publicly honor those men and women who are using information technology, across a spectrum of industries, to make our planet a more humane, healthy and cooperative place to live. In celebrating their achievements, the Program helps to demystify technology and empower people to use technology as a tool for positive change.

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