GIS "in Depth:"
An Emerging Ocean and Natural Sciences Agenda at Esri

The UCSB Department of Geography's 2011 Dangermond Lecture by

Dr. Dawn Wright

Thursday, November 3, 2011, 3:30 – 4:45   1930 Buchanan

Abstract:
Increasingly, GIS is included as part of the growing collaboration between computer scientists, information scientists, and domain scientists to solve complex scientific questions. As we know, Earth system science is based upon the recognition that the Earth functions as a complex system of inter- related components that must be understood as a whole. Examples range from understanding the complex interactions at seafloor spreading centers systems, to exploring the structure and evolution of continental earthquakes and volcanoes, to informing regional decision- and policy-making across several themes in coastal zone management and marine spatial planning. Successfully addressing these scientific problems requires integrative and innovative approaches to analyzing, modeling, and developing extensive and diverse data sets. The current chaotic distribution of available data sets, lack of documentation about them, and lack of easy-to-use access tools and computer modeling and analysis codes are still major obstacles for scientists and educators alike. Contributing solutions to these problems is part of an emerging science agenda for oceanography and related natural sciences that will be discussed. Esri has also recently launched a major ocean GIS initiative, and the talk will highlight some recent projects in progress, including a new Bathymetric Information System, the new ocean basemap, new decision-support tools for coastal and marine spatial planning, developing contributions to the new Ocean Health Index project, and more.

Bio:
In October of 2011, Dawn Wright was appointed as Chief Scientist of Esri. She maintains her appointment as Professor of Geography and Oceanography and Director of the Davey Jones Locker Marine GIS/Seafloor Mapping Laboratory at Oregon State University. Her current research interests include marine data models, benthic terrain and habitat characterization, and coastal/ocean informatics and cyberinfrastructure. She serves on the US National Academy of Sciences Ocean Studies Board and many editorial boards, including the AAG Annals, IJGIS, and J. of Coastal Conservation. She is a fellow of Stanford's Aldo Leopold Leadership Program and of the AAAS.

Dawn received an Individual Interdisciplinary Ph.D. in Physical Geography and Marine Geology from UCSB in 1994, under the excellent mentorship of Ray Smith, Mike Goodchild, Ken MacDonald, Rachel Haymon, and Dale Krause. More about our distinguished alumna can be found at http://dusk.geo.orst.edu/bio.txt and http://dusk.geo.orst.edu/media/joe.html.