

Implementing a Research Agenda to Address Challenging Geographic Information Science Issues

Michael P. Finn and E. Lynn Usery

U.S. Geological Survey
1400 Independence Road
Rolla, Missouri 65401
mfinn@usgs.gov, usery@usgs.gov

Two years ago, the U. S. Geological Survey (USGS) requested that the National Research Council (NRC) develop recommendations for a research agenda in geographic information science supporting *The National Map* and the National Spatial Data Infrastructure (NSDI). The NRC provided short- and long-term recommendations on research priorities for the USGS Center of Excellence for Geospatial Information Science (CEGIS). This year, CEGIS began implementation of the recommendations from the NRC report with five short-term research projects of high priority in the areas of design of the electronic topographic map, user-centered design of a Web interface, data integration, generalization, and ontology for *The National Map*.

Long term research includes fusing geospatial data with non-spatial data, determining how an ontology of features can operationally support *The National Map*, representing temporal and spatial change, and other topics. CEGIS will continue to develop research projects based on the recommendations in the report. As a distributed virtual center, CEGIS relies on government, academic, and private industry staff, and on broad area announcements and grants to support the research agenda. This research will contribute significantly to the goals of the NSDI and *The National Map* towards integrating capabilities that allow for innovative examination and representation of the Earth's system as a whole.