

cartography bulletin board

THE SE MAPS PROJECT

by James R. Anderson, Jr., Director
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On July 15 through July 26, a workshop was held at Clemson University to discuss the development of middle school instructional materials and related cartographic products to investigate the interrelationships among geology, land use, history, cultural diversity, and environmental concerns. Participants came from several southeastern states and included teachers, university faculty, and state agency personnel. Funding for the workshop and the development of curriculum materials is being funded by a National Science Foundation Grant awarded to Clemson University.

The SE (SouthEast) Maps project is an outgrowth of a resource package developed in South Carolina and titled SC Maps. The original South Carolina materials use infrared aerial photographs, Landsat satellite images, state base maps, topographic maps, and soils maps as resources to help study the state's human and geological history.

In South Carolina, ten study sites were selected from five landform regions with physical features clearly visible from high resolution aerial infrared photographs and satellite images. Using these images and related map products, middle school students learned to interrelate the state's geological formation, environmental concerns, historical events, mathematics skills, and cultural development through a variety of activities including storytelling. A

SC Maps Portfolio has been developed that contains classroom sets of laminated maps and photography, wipe off pens, and a teaching manual outlining a variety of cooperative learning activities.

The purpose of the SE Maps project is for students to make connections between:

- Geologic events that have resulted in the state's five landform regions.
- Drainage system, wetlands, and landform regions that have had an impact on the state's historical events and cultural diversity.
- Economic trends and regional differences that have resulted in the diversity of the state's industries, agriculture, and tourism.
- Historical events, regional customs, and cultural diversity interrelated through storytelling.
- Mathematical applications using state statistical data, map reading skills, probability, and ordered pairs.
- Environmental concerns and the recognition that it is their responsibility as citizens to appreciate, use wisely, and preserve the state's unique natural resources.

SC Maps is a collaborative effort initiated by Peggy Cain with the State Department of Education, James (Chip) B. Berry, III, South Carolina Department of Natural Resources, Land Resources Division, and John Wagner, Clemson University, Earth Sciences Department.

Using the South Carolina project as a model, SE Maps will produce a regional curriculum package. The regional package could then serve as a template for individual states to build upon while developing their own local study sites to produce a customized state version of the instructional materials. The SE regional package can also serve as a model for future curriculum development

of similar programs in other regions of the country.

All Southeastern states were invited to send a team of developers to the workshop. At least one team member was to have had experience working with cartographic products and at least one team member was to represent the state's Department of Education. Participants were given information on the development of the South Carolina materials and criteria for the selection of study sites in their states. Each state team will be made up of a coordinator, development team to write the curriculum materials, and resource persons.

During the coming year, each state will develop materials for sites selected in their states. During the summer of 1997, a follow-up workshop will be held to compare local products and finalize the SE Maps package. During the fall of 1997 the materials will be field tested in selected schools.

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THE NEW NATIONAL CENTER FOR HEALTH STATISTICS ATLAS OF UNITED STATES MORTALITY

Linda W. Pickle, Michael Mungiole,
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Thematic maps published in earlier atlases have helped epidemiologists to identify cancer *hot spots* in the U.S. by providing a visualization of the geographic patterns

of mortality not apparent from tabular statistics. Field studies designed to test hypotheses generated by these earlier atlases led to such notable findings as the associations between snuff dipping and oral cancer, and shipyard asbestos exposure and lung cancer.

In light of the demonstrated utility of the cancer atlases, the National Center for Health Statistics (NCHS) is preparing an atlas for the leading causes of death in the U.S. for the period 1988-1992. New features of this atlas include geographic units based on health care patterns, innovative statistical modeling of rates, and the use of cognitive experiments to guide the design of maps and page layout. It also discusses design issues important for mapping death rates using examples from the atlas.

In 1995 the NCHS commissioned Deasy GeoGraphics, Penn State University, directed by David DiBiase, to assist in the production of its *Atlas of United States Mortality*. The Atlas will consist of 72, two-page, four color, choropleth maps, along with graphs, text, and other maps. Color schemes were developed for NCHS by Dr. Cynthia Brewer, along with a reliability hatching scheme designed by Dr. Alan MacEachren. Deasy GeoGraphics' participation in the project included converting digital map files produced by NCHS, into PostScript documents compatible with high-resolution digital imagesetting, thus ensuring an accurate representation of the work done by Drs. Brewer and MacEachren. The atlas should be available by early 1997.

Material contributed by Linda W. Pickle (NCHS) and William Vancura (Penn State University). □

map library bulletin board

*Compiled by Melissa Lamont
Pennsylvania State University*

CARTOGRAPHIC USERS ADVISORY COUNCIL MINUTES

*Thursday May 9, 1996
Library of Congress
Geography and Map Division*

Gary Fitzpatrick, Geographic Information Systems Specialist, started the day by taking the Council on a tour through the *Center for Geographic Information*. The G&M Division recognized that industry partners would be needed to help incorporate emerging technologies into existing services. The Madison Council, a Library of Congress friends group, offered a \$30,000 grant to create the Center. In January of 1995 nine GIS industry leaders attended the first organizational meeting. They decided that membership in the Center would require a five thousand dollar annual contribution and appropriate donations of software, hardware and support. The Center now has twelve members and seven associate members.

The G&M Division also received funding through the National Digital Library Program (NDL), designed to preserve "core historic Americana." The G&M Division has hired four employees for the Center for Geographic Information and has identified several collections to scan for preservation including: panoramic views, land ownership maps, railroad maps, fire insurance maps, civil and revolutionary war maps and general US maps. The staff of the Center are scanning the maps at 300 dpi using a color flatbed *Tangent* scanner. Because of the

size and relative fragility of maps, the G&M Division is the only division doing in-house scanning. The scanned images are being stored on tape at the Division and will be made available via the Internet in the future. The Information Technology Service of the Library of Congress will handle the Internet display and transfer of the map images. The images are not geo-referenced. Staff of the Center consider geo-referencing an intellectual process, one which users will want to complete for themselves.

The Center also has two color ink jet plotters for output. **James Dyson, Automation Operations Coordinator**, demonstrated the scanner and plotter for the Council. The scanned and printed maps provide a high quality, inexpensive surrogate for reference. Although the scanner can handle up to 600 dpi, the lesser resolution is more than adequate to display details, and the files are significantly smaller and therefore easier to transfer and store. At the moment the Center is unable to offer patrons the ability to manipulate the digital image. They hope to move in that direction in the future.

The G&M Division will indicate the availability of the digital image in the MARC record. For those scanned images without records, they will create smaller "reasonable" level records. The NDL project plans call for 5 million items at the Library of Congress to be scanned. Those 5 million items are expected to require 32 terabytes of storage, of those 24 terabytes will come from the G&M Division alone.

A third aspect of the digital initiative at the G&M Division offers public access terminals for electronic mapping. Three X-Window workstations located in the Reading Room, run a variety of mapping software. The Division hopes to offer terminals and services to the Congressional Research Service in the future. Mr. Fitzpatrick