

resolve screen percentage discrepancies between photographic screens and computer generated screens, however, this appears to be a viable solution for the time being. We are also able to scan the text from the previous atlases using character recognition software, and edit and format it using desktop publishing software, however, some manual compositing will be required to combine the computer generated and manually generated negatives for printing.

Although the lab produces most maps today using computers, the task of converting all of the previously produced maps to a computer format is cost prohibitive and in many instances we still find it useful and necessary to employ the "old" manual production techniques (although it is difficult to find people who possess these manual skills). Another trend we see taking place is that as computer mapping software becomes more readily available at a reasonable cost, the demand for cartography lab services has declined from many sectors. Unfortunately, the software does not make a "cartographer" and the quality of maps being produced is certain to suffer when the cartography lab is bypassed.

To ensure our viability we are expanding our interests into two relatively new areas. The first is multimedia. In cooperation with IBM, Apple, and the State Department of Education, CD-ROMs are being developed for distribution to the schools in Florida. The initial effort is an adaptation of the *Atlas of Florida*, which will not only display many of the maps and photos from the atlas, but will contain additional photographs, video, and audio. Future projects utilizing CD-ROM technology are being discussed with state agencies and university faculty members. We are also working with

the Florida Geographic Alliance in developing curriculum materials, with the Earth Science Information Center as a state affiliate to disseminate cartographic information throughout the state of Florida, and in the development of GIS applications. We also actively participate with state agencies in researching and developing specific strategies, methodologies, and implementation plans for improving public access and usability of digital spatial data sets and maps.

In conclusion, the cartography lab at Florida State University has remained a viable operation for over twenty years. This has required a willingness to change to new technology and explore ways to reach non-traditional clients by reaching beyond the university and state government. □

map library bulletin board

ESIC: A Key to Earth Science Data

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The Earth Science Information Centers (ESICs), operated by the U. S. Geological Survey (USGS), National Mapping Division (NMD), are "primary sources of public information on the cartographic activities of the Division as well as the earth science products of the Survey's Geologic and Water Resources Divisions." The Map Library Bulletin Board for this issue is devoted to a brief history of ESIC and an overview of the specialized cartographic and

geographic reference tools available to members of the ESIC network.

History

For many years, the USGS maintained several Public Inquiries Offices (PIOs), a network of earth-science information offices whose primary responsibility was to provide information about the USGS and its products. In addition, they provided a link to information held by State and other federal agencies. The PIOs were located at the USGS' National and Western Regional Centers and in the downtown areas of major cities, where they were convenient for walk-in customers. The PIOs also answered mail and telephone inquiries.

In 1974 the USGS established the National Cartographic Information Center (NCIC) as a national service to make information on cartographic, geographic, and remotely sensed data of the United States more accessible to both the general public and to federal, state, and local agencies. The NCIC's goal was to provide centralized access to all types of cartographic data generated by the federal government, state and local agencies and some private producers. The initial NCIC offices were located at the Survey's national headquarters and at its regional mapping centers. As the NCIC expanded its data collection at the state level, it established, beginning in 1976, a formal network of state affiliated offices to provide local access to information. State affiliates were responsible for acquiring and disseminating cartographic data within their states and for coordinating this activity with their respective Mapping Center NCIC office. Initially, the NCIC network was limited to one affiliate per state with most being a state governmental agency. By 1989, the USGS

had decided to merge the PIO and the NCIC offices into the Earth Science Information Center (ESIC) network. The USGS also continued to expand the network by increasing the number of affiliates within each state, and by accepting map libraries into the network. For example, the Map Section of the University of Illinois at Chicago (UIC) Library became a member in July 1993. The process was initiated by sending a letter of application to the Chief of the Mapping Center in whose region UIC is located. Final acceptance into the ESIC network was accomplished through a "Memorandum of Understanding" that was agreed to by both the USGS and the University's Board of Trustees.

Cartographic and Geographic Resources

In order to fulfill their roles as earth-science data providers, ESIC members maintain a reference file of information brochures, posters, booklets, fact sheets, and price lists for USGS products; and data bases in microform or compact disc format. In addition, ESIC members maintain a supply of the titles most frequently requested that may be distributed to their clientele. Many of these paper titles are already found in Federal Depository Library collections, e.g., "Catalog of Cartographic Data," "NAPP, The National Aerial Photography Program," "Catalog of US GeoData," and "Topographic Mapping" (see Superintendent of Documents number I 19.80: or Depository Item number 619-G-02). Digital data on compact disc, e.g., the "1:100,000-scale Digital Line Graphic (DLG) Data, Hydrography and Transportation," was also made available to depository libraries (see Superintendent of Documents number I 19.120: or Depository Item number 621-J). Although useful in the map library setting, other ESIC data bases that use proprietary software

cannot be distributed through the Depository Library Program. The data held by each State ESIC member are generally limited to the state in which the ESIC is located. Depending on the format of the data base (microfiche versus compact disc), information on other states may also be available. An annotated list of the resources unique to ESIC members is listed below:

USGS 15' and 7.5' topographic quadrangles (microfilm)

High quality black and white 35-mm microfilm of all editions of the maps in these series. Although this microfilm is not distributed through the Depository Library Program, it is available for sale to the public and may already be available in your local map collection. Microfilm provides a compact storage medium for the information contained in out-of-print maps, but one should remember that reproductions are generally smaller than the original scale and that the loss of color may make feature interpretation problematic.

Map and Chart Information System (MCIS)

A system for organizing the ESIC's information about domestic maps and charts, this file contains the name, scale, publisher, publication, revision and survey dates, content and geographical bounds of each map in the file. Information in the MCIS file can be retrieved by any map descriptor as well as by area of coverage. State ESIC members receive this data base in microfiche format in sequence by type of product, latitude/longitude, or State/county. The MCIS microfiche also serves as an index to the microfilm reel on which the topographic maps listed in the first item above are located. A nationwide version of the MCIS appears as a file on the APSRS compact disc discussed in the next section.

Aerial Photography Summary Record (APSRs)

The core of this data base is built on a systematic compilation of aerial photography projects from the following Federal agencies: USGS, the National Aeronautics and Space Administration, the National Ocean Survey, the Environmental Protection Agency, the Department of Agriculture, the Department of Defense, and the Tennessee Valley Authority. This is supplemented by the addition of aerial photography projects from other Federal, State and local agencies and private corporations. Access to projects held by the EROS Data Center is provided by map index graphics, produced in microfiche, showing available photographic coverage, by category. The complete file of detailed information about every aerial photography project and the name, address, and phone number of contributors, is available in the APSRS data base produced on compact disc.

Geographic Names Information System (GNIS)

This data base provides primary information for all known places, features, and areas in the United States, identified by proper name, and consists of three files. GEON, the most frequently used, is the primary and largest data base in GNIS. It contains 60 files representing each state, territory and outlying area, the District of Columbia, and certain specialized files. Each State file contains, as a minimum, the names compiled from the USGS topographic maps series, but many State files contain information from other source materials.

To learn the location and phone number of the State ESIC office nearest you contact the national ESIC office at 1-800-USA-MAPS.

