RSSG Newsletter

Association of American Geographers
Remote Sensing Specialty Group

February 1995 Volume 16 Number 1

From the Chair

The 1995 AAG meeting in Chicago is fast approaching. The preliminary program suggests a full and interesting set of papers and related activities planned and organized by Program Chair, Doug Goodin and Associate Chair, Bill Tyler. Please plan to attend the RSSG's Business Meeting that is scheduled for Wednesday, March 15 from 6:20-7:20 pm. The tentative Agenda for the Business Meeting can be found on page 2. For those reporting to the RSSG, please prepare a brief written copy of your comments that can be delivered at the Meeting to our Secretary, Doug Ramsey for inclusion into the Minutes of the Business Meeting.

In addition to the Business Meeting, I'll be representing the RSSG at a meeting to discuss the interaction between the RSSG and the International Geographical Union set for Wednesday, March 15; the Specialty Group Chairs Luncheon on Thursday, March 16; and the Awards Luncheon, scheduled for Friday, March 17.

Please contact me if you have other items to be included on the Business Meeting agenda.

Stephen J. Walsh
Department of Geography,
University of North Carolina
Chapel Hill, NC 27599-3220
Tel.: (919) 962-3867
FAX: (919) 962-1537
email: sjwalsh@uncvx1.oit.unc.edu

USGS DATA GRANT PROGRAM

The U.S. Geological Survey's (USGS) National Mapping Division Data Grant Program provides an opportunity for nonprofit organizations, who are willing to sign a data rights agreement, to obtain remotely sensed satellite data for application demonstration projects at no cost. These data are limited to the conterminous United States, Alaska, and Hawaii. This program provides no support other than data. Nonprofit organizations may apply by submitting Data Grant Program requests.

A Data Grant Committee, consisting of National Mapping Division researchers, will review requests. Limited quantities of Landsat multispectral scanner (MSS) data and advanced very high resolution radiometer (AVHRR) data will be awarded to those Data Grant Program requestors selected by the committee. Awardees are required to sign data rights agreements to become USGS affiliated users (see attached sample agreement). Specific information on data types, guidelines for submission and evaluation of requests, procedures for data selection and retrieval, and schedules for request completion and reporting are in the announcement of opportunity.

Requestors must adhere to the terms and conditions in the data rights agreement including the publication of research results in a timely fashion. Products from this program are in the public domain; therefore, data provided may not be put to such uses

Continued on page 4...Data Grants

RSSG 1995 Business Meeting
Wednesday, March 15, 1995
6:20 pm
AAG Annual Meeting
Chicago, IL

Proposed Agenda

Welcome, introduction, and attendance--Steve Walsh
Review of agenda items--Steve Walsh

Approval of 1994 RSSG Minutes (by Doug Ramsey)
- published in the June 1994 Newsletter
Secretary-Treasurer report--Doug Ramsey
Report on the Chicago RSSG program--Doug Goodin and Bill Tyler
RSSG Newsletter Editor's Report--Jim Merchant
Nominations and Elections--Secretary-Treasurer; Director; Student Director

Committee Reports--Honors (Kam Lulla); Student Awards (John Harrington)
AAG Committee on Standards for Geographic Data (Kam Lulla)

Regional Councilors Reports-- Regional Councilors
- Middle States, Ray Lougeay (through June 1995)
- NESTVAL, Bill Hamilton (through June 1993)
- Southwest, Kam Lulla (through June 1994)
- Pacific Coast, Doug Stow (through June 1994)
- West Lakes, Shamim Naim (through June 1994)
- East Lakes, David Lusch (through June 1995)
- Great Plains/Rocky Mountains, Mike Hodgson (through 1993)
- Middle Atlantic, Sam Goward (through June 1995).

Program Chair for 1996 Charlotte Meeting
Report of the AAG Specialty Group Chairs Luncheon--Steve Walsh
Report of the IGU/RSSG Linkage--Steve Walsh
Other Business
RSSG/PE&RS letters and reactions
E-mail list of members
Awards and student honors and paper and poster competitions
Document of duties and responsibilities of RSSG officers & assignments
Miscellaneous items.

ELECTION NOTICE

Since an insufficient number of nominations have been received to date, nominations for the offices of Secreatary-Treasurer, Director and Student Director will remain open until the RSSG Business Meeting, March 15, 1995. **Elections will be held at the Business Meeting**. Please send nominations to:

Stephen J. Walsh
Department of Geography,
University of North Carolina
Chapel Hill, NC 27599-3220
Tel.: (919) 962-3867
FAX: (919) 962-1537
email: sjwalsh@uncvx1.oit.unc.edu

USGS DIGITAL MAPPING AND IMAGE DATA ON THE INTERNET

The U.S. Geological Survey USGS is making information about its vast collection of digital mapping and image data accessible by the public via the Internet. The opening of the Clearinghouse is important to the growing community of Geographic Information System (GIS) users. Internet users with one of the popular software applications such as Mosaic can browse descriptions of the different USGS data collections. When a user finds a data set of particular interest, they can click on a symbol and see more details, including instructions on how to order it. Alternately, keywords and latitude/longitude bounds can be used in a powerful searching mode to scan the entire USGS collection. Some of the data sets are on-line for immediate transfer. The Clearinghouse address is:

http://nsdi.usgs.gov/nsdi

The National Geospatial Data Clearinghouse is part of a government-wide effort, led by the Federal Geographic Data Committee, to make all Federal geospatial data available to the public.

US GeoData Available Through the Internet

The U.S. Geological Survey (USGS) offers select US GeoData data bases through the Internet. They can be retrieved using anonymous File Transfer Protocol (FTP) or World Wide Web. The data bases and their directory paths are:

- 1:2,000,000-scale digital line graph data (/pub/data/DLG/2M)
- 1:100,000-scale digital line graph data, hydrography and transportation layers only (/pub/data/DLG/100K)
- 1:100,000-scale land use and land cover data (/pub/data/LULC/100K)
- 1:250,000-scale land use and land cover data (/pub/data/LULC/250K)
- 1-degree digital elevation model data (/pub/data/DEM/250)

FTP Access

To download files from the above data bases using FTP, follow these steps:

1. At the prompt, enter *ftp* and the following Internet address:

edcftp.cr.usgs.gov

2. For "Name:" enter *anonymous*.

3. For "Password:" enter your e-mail address.

4. Change to the directory containing the desired files by entering *cd* and the directory path specified above (for example, to get to the 1-degree DEM file directory, enter *cd pub/data/DEM/250*).

5. Enter *ls* to list the files.

6. Locate the desired quadrangle file. The files are listed by area name, generally in an alphabetical list where, for example, the Austin, Tex., quadrangle would be found under the directory "A."

You would enter *cd A* and then *ls* to see all quadrangle files that begin with the letter A.

When the desired quadrangle has been located, set the file transfer mode to binary by entering *binary* at the prompt. Then enter *get* and the quadrangle name.

World Wide Web Access

US GeoData files can also be retrieved through a USGS World Wide Web server using browse tools, such as Mosaic. To use such graphical interfaces, follow these steps:

1. Under the file option, open the following Uniform Resource Locator (URL) address for the USGS EROS Data Center home page:

http://sun1.cr.usgs.gov/eros-home.html

2. Click on "US GeoData available via FTP." Each of the data bases can be navigated in one or more of the following ways: alphabetically, by State, and through a graphical index.

3. Choose a method of navigation by clicking on that option. Then locate the desired quadrangles.

4. Under the options menu, turn on the "Load to local disk" option.

5. Click on the quadrangle to be downloaded.

README Files

README files can be downloaded from the data base directories for information concerning the US GeoData files. It is recommended that users download and read the README file for their desired data base before changing the transfer mode and downloading the quadrangle files.

File Formats

Data files retrieved using FTP may need to be translated from one format to another to make them usable with different application programs. The
US GeoData files, for example, have been compressed with the GNU public domain "gzip" utility. Users without access to gzip may uncompress the file as it is retrieved by leaving off the ".gz" extension.

The gzip program is available for a variety of platforms via anonymous FTP at the following sites:

- prep.ai.mit.edu
- enterprise.nwi.fws.gov

Uncompressed files for these data are typically five times larger than compressed versions and therefore will take longer to transfer.

Information

For specific information concerning the data bases, US GeoData users guides are available through anonymous FTP at the following site:

nmdpow9.er.usgs.gov

Read the file "readme" in the public directory to find the directory location for the word processing or plain text versions of the appropriate US GeoData users guide. It is recommended that users download and read these files before transferring detailed information.

To purchase a hard copy of any users guide or for further information about Internet access to US GeoData files, call 1-800-USA-MAPS or contact:

U.S. Geological Survey
EROS Data Center Customer Services
Sioux Falls, SD 57198
605-594-6151; FAX: 605-594-6589
E-mail: custserv@edcserver1.cr.usgs.gov

Data Grants...Continued from page 1.

that it would be considered by the Data Grant Committee as in competition with private industry.

Remotely sensed data offered through this program and identified in all related requests are to be used for the demonstration of applications related to land processes research. Land processes are defined broadly as the set of natural processes and human activities that affect the chemical composition, physical properties, and geographic distribution of materials (including inland and coastal waters and ice) on continental land surfaces. Effects of these processes or activities must be expressed on the land surface if the data being offered are to be useful in an investigation.

Each Data Grant Program participant is required to submit a research report that concisely summarizes the results of the demonstration of application of Data Grant Program products. This report, not to exceed three single-spaced typewritten pages, must include: (1) a description of final products, (2) a description of the utility of these products and demonstration of application of these products to the mission of the selected participant's organization, and (3) an overview of the fiscal significance of using Data Each Data Grant Program participant will submit a summary report to:

Data Grant Program
Science and Applications Branch
U.S. Geological Survey
EROS Data Center
Sioux Falls, SD 57198

Data Grant Program requests will be accepted for consideration if postmarked no later than April 1, 1995. Grant requestors will include in their proposals approximate dates when demonstration of application results will be forwarded to the EROS Data Center (EDC) not to exceed one year from date of Data Grant Program award. All products from this award are in the public domain.

Data Grant Program products totaling $50,000 are available and will be divided among the awardees. A data product is defined as one digital MSS scene (all bands), one digital AVHRR scene (all channels), or one CD-ROM set. The Data Grant Committee will consider the following criteria to insure a wide range of participants: (1) type of research, (2) scope of research, (3) geographic location of organizations, (4) data quantities requested, and (5) overall applicability of each Data Grant Program request to land processes research. The Data Grant Committee values conciseness and clarity in the preparation of the Data Grant Program requests. Each applicant provides the following information by preparing a narrative not to exceed three pages.

1.Identify the land processes research to which the data will be applied.
2.Describe how Data Grant Program products will be used for the research. Describe how the research using Data Grant Program products benefits the research community as a whole.
3.List specific data products requested and their dollar value based on the following list:

Landsat MSS Data

Media:	9 track CCT - 6250 bpi	$200.00 /scene
	8 mm cassette - low density	$200.00/scene
	3480 cartridge	$200.00/scene

AVHRR Data

Media: 9 track CCT - 6250 bpi, 8 mm cassette - low density, 3480 cartridge

Data Set:	Level1B(uncorrected)	$100.00 per scene
	Level (geocorrected)	$190.00 per scene
	Composited NDVI	$ 70.00 per tape
Media:	CD-ROM	
Data Set:	Composited NDVI	$32.00 per disk

4.Supply Primary Point of Contact name, title, organization name, address, and telephone number.
5.Provide certification of nonprofit status.
6.Provide name, signature, address, and telephone number of representative authorized to commit organizational resources and funding to land processes research utilizing Data Grant Program products.
7.Give approximate data on which research report on demonstration of applications will be forwarded to EDC not to exceed one year from data of Data Grant Program award.
8.Mail the narrative to:

Data Grant Program
Science and Applications Branch
U.S. Geological Survey
EROS Data Center
Sioux Falls, SD 57198

EOSDIS Langley DAAC

by
Susan Sorlie
Langley DAAC

The Langley DAAC, located at the NASA Langley Research Center in Hampton, Virginia, is responsible for the archival and distribution of NASA science data in the areas of radiation budget, clouds, aerosols, and tropospheric chemistry. The Langley DAAC holdings include Earth Radiation Budget Experiment (ERBE), International Satellite Cloud Climatology Project (ISCCP), First ISCCP Regional Experiment (FIRE), Global Tropospheric Experiment (GTE), Stratospheric Aerosol and Gas Experiment (SAGE I & II), Stratospheric Aerosol Measurement II (SAM II), and Surface Radiation Budget (SRB) data sets. The Langley DAAC will archive several data products that result from the EOS program and other elements of the Mission to Planet Earth, including CERES, EOSP, SAGE III, MISR, MOPITT, and TES. In addition, the Langley DAAC will continue to archive existing earth science data sets.

Users may access the on-line EOSDIS Version 0 Information Management System (IMS) via:

telnet eosims.larc.nasa.gov 12345

or the on-line Langley DAAC IMS via:

telnet eosdis.larc.nasa.gov
login: ims
password: larcims

The Langley DAAC IMS is also accessible via Mosaic: http://eosdis.larc.nasa.gov/

Contact
Langley DAAC User Support Office
NASA Langley Research Center
Mail Stop 157B
Hampton, VA 23681-0001
(804) 864-8656 voice
(804) 864-8807 fax
larc@eos.nasa.gov

Call for Papers

International Society for Photogrammetry and Remote Sensing (ISPRS)
COMMISSION IV, MAPPING AND GEOGRAPHIC INFORMATION SYSTEMS (GIS)
Workshop on
MAPPING AND ENVIRONMENTAL APPLICATIONS OF GIS DATA
September 28-29, 1995
Madison, Wisconsin, USA

Submission of papers on the following topics is encouraged:

- **Applications of GIS to mapping, planning, and natural resource inventory**
- **Environmental GIS database construction with Global Positioning Systems (GPS), photogrammetry, remote sensing and digital image processing**
- **Hardware and software for GIS**
- **Integrating digital orthophotos and digital raster graphics with GIS**
- **Integration of GIS with remote sensing and photogrammetric data**
- **Mapping techniques using GIS**
- **Regional and global inventories using GIS**

Final papers (camera-ready copy) will be required by August 15, 1995, to allow printing for distribution of the Proceedings at the meeting. ***Abstracts of 200 words or less should be transmitted by fax, email, or postal service on or before July 1, 1995,*** to:

Lynn Usery
University of Georgia
Department of Geography
Room 204, GGS Building
Athens, Georgia, USA 30602-2502
Ph: 706/542-2345
Fax: 706/542-2388
Email: usery@feature.ggy.uga.edu

EOSDIS - Earth Observing System Data and Information System

A recent listing of addresses for EOSDIS Distributed Active Archive Centers (DAACs) contained some errors. Thanks to Susan E. Sorlie, EOSDIS Langley DAAC, for providing the following corrections:

ASF DAAC User Services
Alaska SAR Facility
University of Alaska
PO Box 757320
Fairbanks, AK 99775-7320
907/474-7487 voice
907/474-7290 fax
Internet: asf@eos.nasa.gov
URL: http://goofy.gi.alaska.edu:12355
Discipline: Polar processes, SAR products

EDC DAAC User Services
U.S. Geological Survey
EROS Data Center
Sioux Falls, SD 57198
605/594-6116 voice
605/594-6589 fax
Internet: edc@eos.nasa.gov
URL:
http://sun1.cr.usgs.gov/landdaac/landdaac.html
Discipline: Land processes

Goddard DAAC User Services
NASA Goddard Space Flight Center
Code 902.2
Greenbelt, MD 20771
301/286-5033 voice
301/286-1775 fax
Internet: gsfc@eos.nasa.gov
URL: http://daac.gsfc.nasa.gov/
Discipline: Upper atmosphere, global biosphere, atmospheric dynamics, geophysics

JPL DAAC User Services
Jet Propulsion Laboratory
Mail Stop 300-320
4800 Oak Grove Drive
Pasadena, CA 91109
818/354-0151 voice
818/393-2718 fax
Internet: jpl@eos.nasa.gov
URL: http://seazar.jpl.nasa.gov/
Discipline: Physical Oceanography

Langley DAAC User Services
NASA Langley Research Center
Mail Stop 157B
Hampton, VA 23681-0001
804/864-8656 voice
804/864-8807 fax
Internet: larc@eos.nasa.gov
URL: http://eosdis.larc.nasa.gov/
Discipline: Radiation Budget, Clouds, Aerosols and Tropospheric Chemistry

MSFC DAAC User Services
977 Explorer Boulevard
Huntsville, AL 35806
205/922-5932 voice
205/922-5859 fax
Internet: msfc@eos.nasa.gov
URL: http://wwwdaac.msfc.nasa.gov/
Discipline: Hydrologic cycle

NSIDC DAAC User Services
National Snow and Ice Data Center
CIRES, Campus Box 449
University of Colorado
Boulder, CO 80309-0449
303/492-6199 voice
303/492-2468 fax
Internet: nsidc@eos.nasa.gov
URL: hhtp://eosims.colorado.edu:1733
Discipline: Snow and ice, cryosphere and climate

ORNL DAAC User Services
Oak Ridge National Laboratory
PO Box 2008, Mail Stop 6490
Oak Ridge, TN 37831-6490
615/241-3952 voice
615/574-4665 fax
Internet: ornl@eos.nasa.gov
URL: http://www-eosdis.ornl.gov
Discipline: Biogeochemical dynamics

SEDAC User Services
CIESIN SEDAC
2250 Pierce Road
University Center, MI 48710
517/797-2727 voice
517/797-2622 fax
Internet: ciesin.info@ciesin.org
URL: http://www.ciesin.org
Discipline: Human dimensions of global change

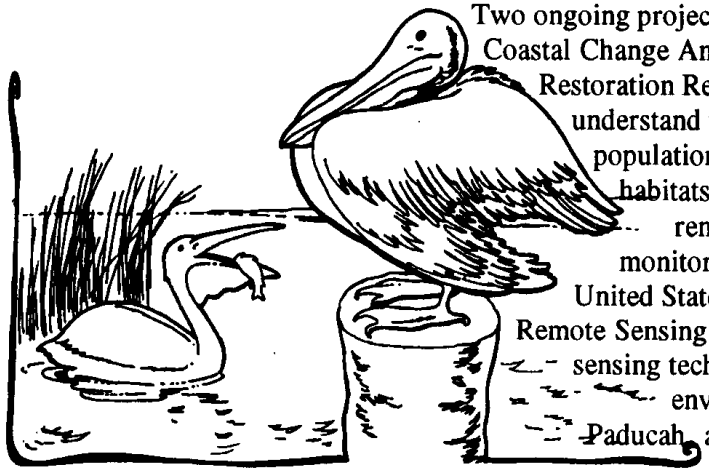
OAK RIDGE NATIONAL LABORATORY
Oak Ridge, Tennessee

by

Michael E. Hodgson

The **Oak Ridge National Laboratory** (ORNL) is a Federally Funded Research and Development Center (FRDC), with over 4000 full time employees. For those unfamiliar with the FRDC term, there are some 100 other FRDCs in the United States, including NASA's Jet Propulsion Laboratory, EPA's laboratories, and other national laboratories. Although ORNL began with an emphasis on nuclear research during World War II, only 11 percent of the current work is related to nuclear technologies. There is quite a wide variety of other research programs at ORNL, many of which rely on remote sensing and geographical information system (GIS) technologies.

The first remote sensing and geographic information system activities at ORNL began with a National Science Foundation sponsored effort in 1969. Commercial remote sensing and GIS software did not exist at the time, so the supporting software was developed at the Laboratory. Today, there are over a hundred staff members that are directly involved in the data acquisition, mapping, or geographical analyses using remote sensing and geographical information systems. Because of the large and diverse nature of such activities (particularly in GIS), this summary mentions only two selected programs - one national in scope and the other local.



Two ongoing projects that ORNL plays a lead role in are NOAA's Coastal Change Analysis Program (CCAP) and DOE's Environmental Restoration Remote Sensing Program. In response to a need to understand the linkages between declining coastal fish populations and changes in upland, wetland, and submerged habitats, ORNL has led the technical effort to define the remote sensing/GIS methods for a nationwide monitoring of land cover change in coastal regions of the United States. Objectives of the Environmental Restoration Remote Sensing and Special Surveys Program are to use remote sensing technologies to characterize, map, and monitor environmental problems at the Oak Ridge Reservation, Paducah, and Portsmouth DOE facilities. These environmental problems include locating buried wastes, monitoring transportation (naturally and anthropogenically induced) wastes, and monitoring other effected parts of the ecosystem.

While the CCAP relies primarily on Thematic Mapper imagery for mapping land cover change and natural color photography for mapping submerged rooted vascular plants, the environmental restoration program at the Oak Ridge Reservation uses almost every imaginable sensor and platform. Aerial photography is used to create high resolution digital orthomaps and elevation models. Seeps and springs are located with predawn thermal imagery. Magnetometer surveys assist in locating buried metal containers and gamma ray detectors are used for mapping surface emissions. The platforms for these sensors range from human walkover and remote controlled aircraft to satellites. Even imagery from the intelligence sources has been analyzed for elusive clues to environmental degradation, buried wastes, and material transport. This myriad collection of imagery sources may beunparalleled for any single geographic place.

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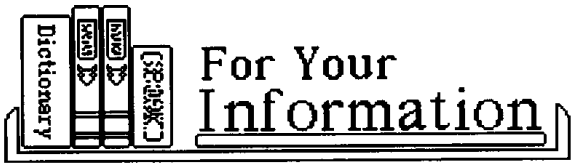
ORNL...Continued from page 7.

Staff at ORNL utilize a variety of analytical systems for the research activities. Familiar software systems supplied by the commercial vendors, such as Arc/Info, ERDAS Imagine, PC- Eye, I2S, Map-Info, Intergraph, etc., are commonly used. A variety of other innovative approaches developed at the Laboratory are used for specific problems (e.g. groundwater transport or surface water transport modeling). In some programs, entire systems have been developed for unique military applications (e.g. the U.S. Air Force's Military Airlift Deployment Analysis System). A number of efforts are aimed at the development of knowledge-based approaches to extracting information from multi-source remotely sensed imagery. Supercomputers at the Laboratory (e.g. Kendall Square, IBM SP2, and Intel Paragons) continue to play an even greater role in the transformation, analysis, and geographical modeling of data and information supporting these environmental studies.

Similar to other large laboratories, it is quite common for a broad range of staff in different disciplines to team on research problems that are geographic in nature. In fact, the multidisciplinary nature of these research activities are the norm. Such synergistic efforts of different disciplines and agencies involved at ORNL provide a fertile environment for the exploration of applications amenable to remote sensing and GIS technologies.

For additional information on remote sensing and GIS rsearch at Oak Ridge National Laboratory, contact:

Michael E. Hodgson
GIS and Computer Modeling Group
P.O. Box 2008
Building 4500N, Mail Stop 6274
Oak Ridge National Laboratory
Oak Ridge, TN 37831-6274
Phone: (615) 241-5701
FAX: (615) 574-4634
hodgsonme@ornl.gov



ERIM 1995 CALENDAR

The Environmental Research Institute of Michigan (ERIM) has prepared its 1995 remote sensing calendar. As always, the calendar includes a wide variety of images including airborne MSS, Landsat and ERS-1 data. Most of the images depict results of data analyses such as change detection. To request a copy, while supplies last, contact:

Bill Tyler
Environmental Research Institute of Michigan
P.O. Box 134001
Ann Arbor, MI 48113-4001
Tel: (313) 994-1200 ext. 3609

NEW CD-ROMs FROM NOAA

A new CD-ROM portraying land cover changes in the Chesapeake Bay region between 1984 and 1988-89 is now available. Based on analysis of Landsat TM data, the database was developed to support the NOAA Coastal Change Analysis Program.

NOAA has also released the Global View CD-ROM, a four volume collection that includes AVHRR data, global ecosystem data, land use and land cover data and terrain models. The GeoVu access software accompanies the CD-ROMs.

For additional information contact:

NOAA/National Geophysical Data Center
32 Broadway
Boulder, CO 80303
Tel: (303) 497-6958
FAX: (303) 497-6513
email: info@ngdc.noaa.gov

EOSAT 1995 CALENDAR

The Earth Observation Satellite Company (EOSAT) has published its 1995 full-color spiral-bound calendar book. This year's edition includes images of Canada, Portugal, Russia, Niger, Iraq and other locales acquired by Landsat, JERS-1 and Russian Kosmos KVR-1000 sensors. To request a copy, contact:

Earth Observation Satellite Company
4300 Forbes Boulevard
Lanham, MD 20706-9954
Tel: (800) 344-9933

SPRING/SUMMER JOBS IN REMOTE SENSING

RESOURCE21, a wholly owned subsidiary of the Institute for Technology Development (ITD), is seeking qualified individuals to perform image processing and interpretation tasks. Six analysts are being sought. The positions will be filled on a full time, temporary basis through August 1995. All positions will be located in Gulfport, MS. Desired qualifications include: UNIX experience, course work and/or previous experience with image processing, remote sensing, spatial analysis or related areas; BA in geography, Computer Science or a related area. However, all interested persons are invited to apply as training in aspects of remote sensing relevant to the positions will be provided. Students are encouraged to apply. For additional details contact:
David Kettler, Tel. (601) 688-2509; email: dkett@pa.itd.com

USE YOUR NEWSLETTER

The RSSG Newsletter is your vehicle for communicating with colleagues interested in remote sensing. You are invited to send news regarding publications, awards, honors, academic programs, research activities, commercial ventures, students, jobs and other announcements to:

James W. Merchant
Conservation and Survey Division
University of Nebraska-Lincoln
113 Nebraska Hall
Lincoln, NE 68588-0517
Telephone: (402) 472-7531
FAX: (402) 472-2410
Internet: jm1000@tan.unl.edu

If possible, please submit contributions on a disk in Wordperfect or ASCII format or by email.

RSSG Newsletter
c/o James W. Merchant
Conservation and Survey Division
University of Nebraska-Lincoln
113 Nebraska Hall
Lincoln, NE 68588-0517