The Map Legend

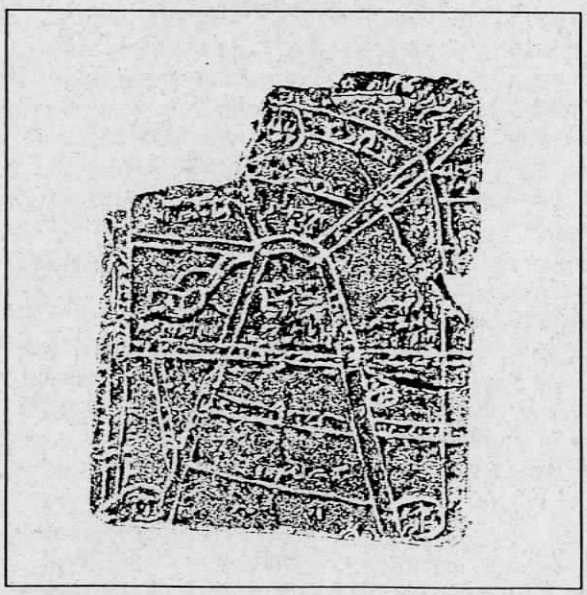
New Mexico Geographic Information Council, Inc.

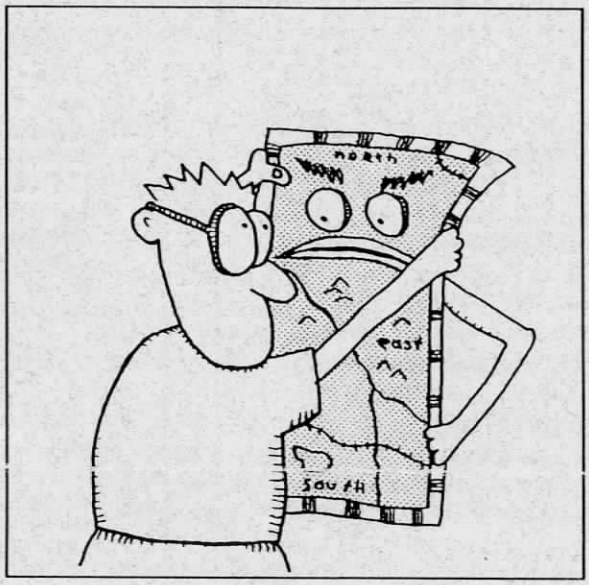
...reporting on geographic information for and about the Land of Enchantment...

Volume 4, Number 3 *Spring 1993*

Maps with an attitude

If you think that maps give only the facts, take another look. Below, we see a clay tablet with a plan of fields from Babylonia, 1500 B.C., just one of the maps in an exhibition, "The Power of Maps," recently shown at the Cooper-Hewitt National Museum of Design in New York. The exhibition presents over 300 historic and contemporary maps—from road maps and world maps to star charts and sea charts to a map showing the spread of AIDS in Ohio—demonstrating that all maps present information selectively, shaping our view of the world and our place in it. Maps tell us something about the people who made and used them, the place and time they were made, and the interests of their makers and societies at the time they were made.





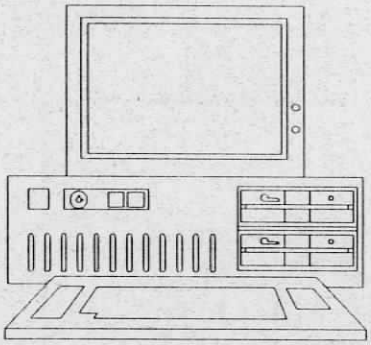
"The heroic mapping project of the Cassini family served the interests of the French crown, just as the cartographic activities of Lewis and Clark advanced those of the U. S. under Thomas Jefferson," explains Dennis Wood, co-curator of the exhibition. To supporters of the French monarchy, and to Americans who believed in the potential westward expansion, these projects no doubt seemed innocent enough, but to those restive under the French king and to Native Americans, they had a different character. Every map serves a point of view. Is it yours? (from Lapidary Journal, used with permission)

Dave Love, NMGIC Board of Directors

NMGIC Spring Meeting
May 5, 1993

The NMGIC Spring Meeting will be highlighted by a three-quarter day workshop on Spatial Data Transfer Standard (SDTS) which will be presented by Richard Hogan of the U. S. Geological Survey.

The Map Legend



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The Map Legend is published quarterly by the New Mexico Geographic Information Council and is a benefit of membership in NMGIC. The opinions expressed are those of the contributors and do not necessarily represent the views of the New Mexico Geographic Information Council, except where specifically noted. The mention of trade names or products does not constitute an endorsement of the NMGIC. Members are invited to send articles and announcements of interest to the editor by the following deadlines: September 1, December 1, March 1, June 1. Please direct all correspondence to:

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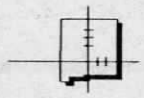

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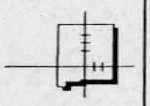

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From the President
Tom Henderson
March 1992

We are undergoing a paradigm shift. We are changing the way we view the world—literally. Our physical senses of hearing, vision, touch, taste, and smell are the only physical link we have to the real world. Everything else we perceive about the reality around us is based on these senses and is simply an abstraction. When we look out the window, we don't see strings of alpha-numeric characters on a computer listing; we see features such as trees, buildings, and power lines and automatically understand the relationships among them. Through our senses, we perceive spatial reality in the context of location; that is, geography provides a framework to space. The new paradigm is truly a "spatial infrastructure."

We are drawn to these new ways of looking at the world because they are less of an abstraction of reality than everything which came before. That is so because spatial infrastructure recognizes geography not as simply an element or attribute of reality, but the spatial framework of reality. We are all geographers; we have to be to conduct our daily lives. We cannot drive our cars, move from room to room, or catch a baseball without knowing where we are and where we want to be. Therefore, the new paradigm is intuitive, whether or not it is perceived as such.

The technologies for capturing and recreating the geographic reality around us have matured dramatically in the past few years. Remotely sensed imagery has increased in resolution and decreased in cost. GPS is, as the Trimble Navigation company says, the "next utility." Low-cost GPS receivers will be in our cars, boats, backpacks, and even our wrist watches. With this capability to readily record and measure any physical feature, digital geographic data will become the building blocks of the spatial infrastructure. The architecture that cements these blocks together to produce informational edifices—one day skyscrapers—is geographic computing technology, most notably GIS. We no longer have to recreate the world in alpha-numeric flat files. We have the basic tools; it is now a matter of providing institutional settings to make effective use of them. A tool not used properly is virtually worthless.

The New Mexico Geographic Information Council brings together those people who must make a difference in their own particular institutions. The success of NMGIC has not been because of the social aspects of the organization, although social contacts are important. Its success has not been because of the quality of the technical presentations, although they are valuable. At the heart, it has been successful because each of its members, as diverse as they are, is viewing the reality of the world from different facets of the same whole: the spatial infrastructure. What unites us in diversity is the underlying framework of geographic information. It is because we understand this common language that geologists, engineers, cartographers, planners, surveyors, biologists, soil scientists, foresters, real estate agents, and many other professions can come together in one organization. We are all builders and users of the spatial infrastructure. It is up to us to promote the paradigm and to change our respective institutions to make full use of it. In doing so, we bring ourselves and others one step closer to reality.

"Introduction to ARC/INFO" software training session

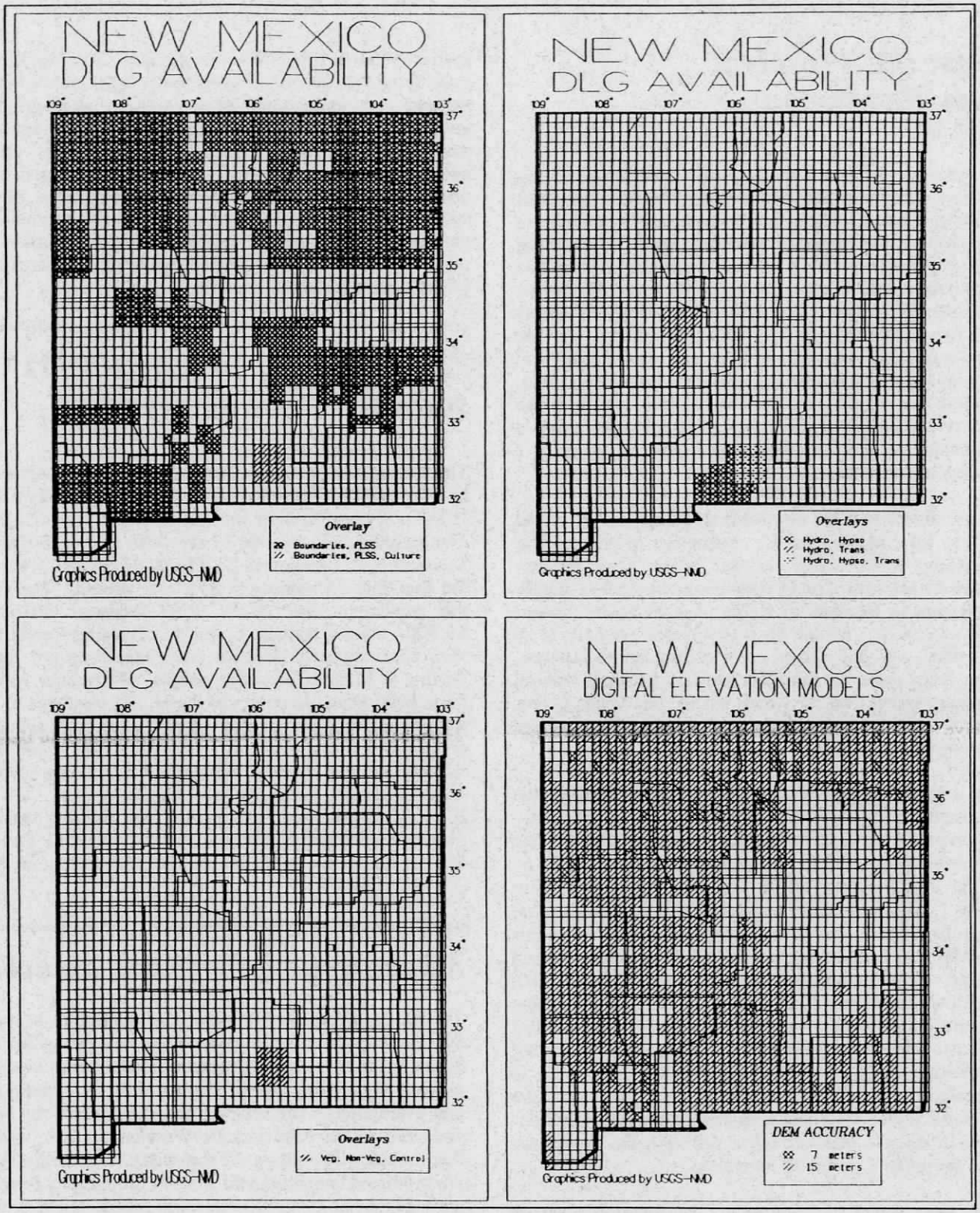
The General Services Department Information Systems Division (ISD) has scheduled an Introduction to ARC/INFO software training session for April 12-16, 1993. The training will be held in the John Simms Building, Second Floor, Classroom 2. The training session fee for the five days of training is $950 per person. The five-day training session at the ESRI Regional Offices is $1,500. On-site training at the ISD Training Center will save approximately 40% in cost, excluding per diem. Seating is limited to twelve people. Placement will be on a first come, first served basis. If response to the training exceeds our seating capacity, ISD will schedule additional training sessions to accommodate those individuals who did not get assigned to this training session.

If you are interested in attending this training session, please contact Ted L. Talmon, GSD/ISD, P. O. Drawer 26110, Santa Fe, NM 87502-0110 or telephone 827-2047; Fax 827-2325.

Albuquerque orthophotos available

The U. S. Geological Survey's Albuquerque Mapping Support District Office (AMSDO) has copies of two digital orthophoto quarter-quadrangles that are available to the NM mapping and GIS community for examination and evaluation. The quarter-quadrangles are the NE/4 and SE/4 of the Albuquerque West quadrangle, an area that includes downtown Albuquerque. The orthophotos are produced from National Aerial Photography Program photographs at 1:40,000 scale and are designed to meet accuracy standards at 1:12,000 scale. The orthophotos have a pixel size of 25 microns with an effective ground resolution of around one meter. They are 8-bit black and white (256 gray scales). Each quarter-quadrangle has a file size of approximately 55 Mb. To obtain a copy of the orthophotos, call AMSDO at 505 265-7796 or mail to P. O. Box 355583, Albuquerque, NM 87176.

Sam Bardelson, Chief, AMSDO



The U. S. Geological Survey National Mapping Division is currently revising 24 7.5-minute quadrangles in the Albuquerque area and will soon be revising 16 more quadrangles between Albuquerque and Belen. During the revision process, it is possible to generate 1:12,000-scale digital orthophoto quadrangles (in four quarters per quadrangle). Users of digital map and orthophoto quadrangles should band together and let the U. S. Geological Survey know now that they want some or all quadrangles in digital form. The cost is about $195 per quarter quadrangle (no hard copy), so shared costs among users should be reasonable. If you are interested, even in only one or two quadrangles, please contact Dave Love (835-5146) or Sam Bardelson (265-7796).

Corporate profiles

KOOGLE & POULS ENGINEERING
Photogrammetric Engineers & Surveyors

8338A Comanche NE
Albuquerque, New Mexico 87110
505 294-5051

Since their founding in 1964, Koogle & Pouls Engineering has obtained extensive experience in geodetic surveys; site surveys; utility surveys; black-and-white, color, and color infrared aerial photography; reprographics; analytic aerotriangulation; orthophoto preparation; photogrammetric mapping; and geographic and attribute database construction. They have also successfully completed projects covering a wide geographic area—from Washington State through California, to the City of Chihuahua, Republic of Mexico, thence to Arkansas and Wisconsin. Their staff includes professional engineers, professional surveyors, and certified photogrammetrists whose many years of experience include projects located from the Alaskan North Slope to the Republic of Zaire. The experience of sensor staff members covers from 20 to 40 years of diverse assignments covering the entire spectrum of photogrammetric engineering and allied control surveys. Since their founding, they have utilized a *Total Quality Management* approach to projects, where every staff member accepts the responsibility, within the framework of an overall program, for the accuracy of their work. Their clients receive support from experienced personnel, knowledgeable in the utilization of the advanced instrumentation available to them. Key personnel work closely with clients to ensure that they benefit from the reservoir of available photogrammetric experience and to ensure that each project is planned in the most cost effective manner to obtain the data and accuracies they require for present and future needs.

Koogle & Pouls has maintained an investment in technology, resulting in a complete surveying and photogrammetric capability including four Ashtech ME-XII global positioning receivers, Geodimeter 440 "Total Station" with Geodat 126, automatic data recorder, supercharged Cessna 206 aircraft, Zeiss RMKA 15/23 camera with closed circuit TV navigation monitors, automated film processor, automated color processor, Borrowdale process camera, customized HE12 rectifying enlarger, Kern DSR 14 analytical stereoplotters, Intergraph 6040 and 6440 Interpro workstations, and Precision Image 636 color electrostatic plotter.

NEW MEXICO TECHNET, INC.

4100 Osuna NE, Suite 103
Albuquerque, New Mexico 87109

Objective: to promote economic growth within New Mexico by developing and operating data communications networks providing timely transfer of information among federal research laboratories, educational institutions, state government, and the private business sector.

- The support of specialized information needs in the State including technology transfer.
- Facilitate joint research projects between facilties in the State.
- To extend the network's infrastructure and maintain its state-of-the-art technology.
- Improvement in the efficiency of delivery of public services.
- To innovate and support the use of communications and information technology in support of education in New Mexico.
- To provide services to the private sector, the income from which is used to support the pro bono efforts of the corporation.

ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE, INC.

1426 Pearl Street, Suite 210
Boulder, Colorado 80302
303 449-7779

Founded in 1969 as a research group devoted to improving methods of handling geographic data, Environmental Systems Research Institute, Inc. (ESRI) has since become a leading vendor of geographic information system (GIS) software, with clients located worldwide. ESRI also offers education, consulting, and data automation services related to geographic information management. In addition to headquarters in Redlands, California, ESRI has nine domestic regional offices, eight international offices, 95+ domestic PC software distributors, and approximately 50 international software distributors.

ESRI's flagship product is the ARC/INFO GIS software, which was first introduced in 1982. Simply put, the ARC/INFO GIS integrates geographic information with a relational database management system to allow for the capture, management, analysis, and display of geographic data. ARC/INFO is used by thousands of organizations worldwide for environmental analysis,

Positions

The Map Legend is starting a Positions Announcements service. If you are posting a position or looking for one, send the announcement to the editor for inclusion in the next *Map Legend*.

automated mapping/facilities management (AM/FM), urban and regional planning, resource management, health information services, publication quality digital map production, transportation analysis, market research and planning, education and research, and many other applications. In addition to ARC/INFO, ESRI also offers the ArcView and ArcCAD GIS software products.

DAGGETT SURVEYING, INC.

P. O. Box 2789
Farmington, New Mexico 87499-2789
505 326-1772

Daggett Surveying, Inc., is the largest surveying firm in the Four Corners region with offices in Farmington, New Mexico, and Grand Junction, Colorado. The company was originally founded to provide surveying for pipelines and oil and gas facilities. Daggett Surveying has expended to offer a broad range of services including aerial photographic control surveys and global positioning system (GPS) surveying, as well as topographic, property, and construction surveying.

Daggett Surveying has the finest survey drafting department in the region. Using the most up-to-date CAD software and computer systems our company has accumulated a surveying and mapping database that encompasses the entire San Juan Basin. Daggett Surveying also offers complete, fast, and accurate raster scanning and vectorizing services.

The next time you are in Farmington, New Mexico, please stop by our corporate headquarters for a visit and demonstration of our services.

TERRA IMAGING CORPORATION

3700 Osuna Road NE, Suite 502
Albuquerque, New Mexico 87109
505 345-9654

Terra Imaging is a New Mexico consulting firm dedicated to the advancement of GIS and the integration of remote sensing imagery. Terra Imaging's primary focus is in the design and development of GISs that integrate a variety of data sets—from digitized data and GPS ground data to aerial or satellite imagery. Whether its urban planning, natural resource management, or infrastructure development, Terra Imaging can develop an accurate base map or develop specific GIS applications for present and future needs. Services include:

- Digitizing or scanning of maps or aerial photography.
- Relational data base system evaluation, design, and creation.
- Global Positioning System (GPS)/GIS integration.
- Digital image analysis and integration into a GIS.
- Custom programming tailored to the user's requirements.
- Quantitative modeling of natural resource applications.

Terra Imaging represents the following leaders in the GIS, remote sensing, and GPS industry for providing integrated solutions.

ESRI—GIS products (PC ARC/INFO, ArcCAD, and ArcView); ERDAS—image processing software (PC ERDAS and IMAGINE); EOSAT—Landsat TM satellite data; FMS—Facility Mapping Systems, Inc. (AutoCAD based - FMS/Arc and FMS/AC); Magellan—advanced hand-held GPS receivers; GeoResearch—automated GPS mapping software; Altek—digitizing products.

CALENDAR

April 6-8. Introduction to Radar Imagery Interpretation, workshop, Stennis Space Center, Bay Saint Louis, Mississippi. Contact: USGS, Applications Assistance Facility, Building 3101, Stennis Space Center, MS 39529. 404 248-9000.

April 7-9. Environmental Modeling with ARC/INFO, course, University of Vermont, Division of Continuing Education, Colchester Business Park, 30 South Park Drive, Colchester, VT 05446-2501. 800 656-2088.

April 8. GIS Modeling and Applications, seminar, Airport Marriott, Kansas City, Missouri. Contact: ERDAS, 2801 Buford Highway NE, Suite 300, Atlanta, GA 30329-2137. 404 248-9000.

April 12-16. State of the Art Photogrammetric Mapping, conference, Marriott's Orlando World Center Resort and Convention Center, Orlando, Florida. Contact: The International Society for Optical Engineering, P. O. Box 10, Bellingham, WA 98227-0100. 206 678-3290.

April 13. GIS Modeling and Applications, seminar, Seattle Marriott Sea-Tac, Seattle, Washington. Contact: ERDAS, 2801 Buford Highway NE, Suite 300, Atlanta, GA 30329-2137. 404 248-9000.

April 15. GIS Modeling and Applications, seminar, Sheraton Inn, Sunnyvale, California. Contact: ERDAS, 2801 Buford Highway NE, Suite 300, Atlanta, GA 30329-2137. 404 248-9000.

April 19-20. On Common Ground Conference, Hyatt Regency Tech Center, Denver, Colorado. Sponsored by Geo Info Systems, GPS World, and CADalyst magazines. Contact: Conference Registrar, On Common Ground Conference, P. O. Box 10460, Eugene, OR 97440-2460. 503 343-1200.

April 20-23. Digital Image Analysis, course, Center for Advanced Land Management Information Technologies (CALMIT), University of Nebraska-Lincoln. Contact: CALMIT, 113 Nebraska Hall, University of Nebraska-Lincoln, Lincoln, NE 68588-0517. 402 472-8197 or 472-2565.

May 4-6. U.S. Geodata Data Base Access via CD-ROM Technology, workshop, Stennis Space Center, Bay Saint Louis, Mississippi. Contact: U. S. Geological Survey, Applications Assistance Facility, Building 3101, Stennis Space Center, MS 35929. 601 688-3541.

May 5. New Mexico Geographic Information Council Spring Meeting. UNM Continuing Education Center, 1634 University Boulevard NE, Albuquerque, NM. Contact: Amy Budge, Technology Application Center, Albuquerque, NM 87106. 505 277-622.

May 8-11. Spatio-Temporal Reasoning in GIS, University of California at Los Angeles Conference, Lake Arrowhead, California. Specialist meeting sponsored by the National Center for Geographic Information and Analysis. Contact: Max J. Egenhofer, National Center for Geographic Information and Analysis, 5711 Boardman Hall, University of Maine, Orono, ME 04469-5711. 207 581-2114.

May 10-12. National Geo-Data Policy, Sheraton Premiere Hotel, Tysons Corners, Virginia. Topic: National Spatial Data Infrastructure. Contact: FGDC Secretariat, U. S. Geological Survey, 590 National Center, Reston, VA 22092. 916 363-5000.

May 17-19. Energy and the Environment: GIS and Remote Sensing Applications, seminar, Adam's Mark Hotel, Houston, Texas. Sponsored by Earth Observation Satellite Company (EOSAT). Contact: June Glover, EOSAT, 9439 Research Boulevard, Suite 400, Austin, TX 78759. 512 343-4513.

May 17-21. Workshop on Satellite Remote Sensing/GIS for Natural Resource Management, University of Idaho. Contact: David Verbyla, Department of Forest Resources, University of Idaho, Moscow, ID 83843. 203 8857209.

May 24-28. Thirteenth Annual ESRI User Conference, Palm Springs Convention Center, Palm Springs, California. Contact: Conference Coordinator, ESRI, 380 New York Street, Redlands, CA 92373. 714 793-2853.

June 7-9. Computing in Building and Civil Engineering, International Conference, Disneyland Hotel, Anaheim, California. Contact: Specialty Conference Department, American Society of Civil Engineers, 345 East 47th Street, New York, NY 10017. 212 705-7139.

June 7-10. Remote Sensing in Water Resources, course, Center for Advanced Land Management Information Technologies (CALMIT), University of Nebraska-Lincoln. Contact: CALMIT, 113 Nebraska Hall, University of Nebraska-Lincoln, Lincoln, NE 68588-0517. 402 472-8197.

June 21-25. GIS Applications in Transportation, workshop, Stennis Space Center, Bay Saint Louis, Mississippi. Contact: U. S. Geological Survey, Applications Assistance Facility, Building 3101, Stennis Space Center, MS 35929. 501 688-3541.

June 21-25. GIS/GPS '93, Third International Conference, Sheraton Hotel and Towers, Seattle, Washington. Contact: GeoResearch, 115 North Broadway, Billings, MT 59101. 406 248-6771.

July 25-27. International Conference of the Society for Environmental Geochemistry and Health (SEGH), New Orleans, Louisiana. Contact: SEGH Conference 1993, P.O. Box 19737, New Orleans, LA 70179-0737.

July 25-29. URISA '93, conference and exhibit, Inforum, Atlanta, Georgia. Contact: Urban and Regional Information Systems Association (URISA), 900 Second Street NE, Suite 304, Washington, DC 2002. 202 289-1685.

Terra Imaging

Terra Imaging Corporation (TIC) a New Mexico consulting firm, is now an official distributor for Earth Observation Satellite Company (EOSAT). The firm will provide Landsat satellite data to public and private agencies throughout the southwest region of the United States. TIC's primary purpose is to provide consultation and services in the area of Remote Sensing and Geographic Information Systems. Terra Imaging is presently a New Mexico state contractor for geographic information systems services and data conversion/ processing services. TIC is also a value added reseller for other industry leaders such as ERDAS, C.S.R.I., Altek, Magellan, and GeoResearch Products.

NMGIC mailing list access

Occasionally, someone will request access to the membership list of NMGIC. If you do *not* wish your name to be made available, please notify Amy Budge at the Technology Application Center.