

## Highlights From the Spring Meeting



The NMGIC Spring meeting, held May 3, 1996, focused on the United States/Mexico border and featured speakers with projects and programs in the region. The presentors were Dr. Diego Fabian Lozano-Garcia from the Instituto Tecnológico Y De Estudios Superiores De Monterrey in Monterrey, Nuevo Leon, Mexico; Dr. Bobby Creel, NM Water Resources Research Institute at NMSU in Las Cruces; Dr. David Henkle, UNM School of Architecture and Planning; and Dr. Bob Czerniak, Department of Geography, NMSU. Dr. Chip Groat from the Center for Environmental Resources Management, UTEP, set the stage for the discussion by describing the Transboundary Resources Inventory Project, an effort to establish binational GIS resources and database networks.

Approximately 90 people attended the meeting. Exhibits from seven vendors in GIS and GPS technologies were available for viewing throughout the day. During the business meeting, awards were made to Nathan Masek and Dave Love. Nathan was awarded a \$500 scholarship based on his project titled *Congestion Management System for the Albuquerque Metropolitan Planning Area*. Dave Love was awarded a plaque for his dedicated leadership as chair of the State Mapping Advisory Committee. Lee Aggers and David Hester from the USGS National Mapping Division described the Middle Rio Grande Basin study, a project undertaken by USGS at the request of Senator Pete Domenici to study ground water resources in the basin.

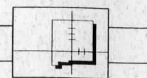
The Fall NMGIC meeting is tentatively planned for October 25th in Albuquerque.

### Thank You, Jeanette

The NMGIC Board expresses its appreciation to Jeanette Albany for her hard work in designing the *Map Legend*. Her artful eye and creativity helped to make the *Map Legend* a publication that has received critical acclaim and has been recognized nationally. Jeanette has taken another position at UNM. Her contributions and talents will be missed by the NMGIC Board and members. Thanks, Jeanette, for a job well done.

### Inside This Issue

NMGIC is on the Internet .....	2
Updated Geodetic Control CD-ROM .....	3
NMGIC Scholarship Awarded .....	4
NRCS Digitizing Soil Surveys .....	7



## From the President

**Status of NMGIC:** I am pleased to report that NMGIC continues to draw interest and support in the region. This is evident in our corporate sponsors, half of whom are from the region, but outside of New Mexico. It is also apparent by the attendance of the spring meeting last May. For the past several meetings, we have consistently drawn an audience of 80 or 90 people, many of whom are NMGIC members, but also quite a few non-members that come because of our program and exhibits. Many of these people ultimately join NMGIC. Our annual membership has been consistent at 200. We began offering student membership during 1996, which encouraged students statewide to participate in NMGIC activities and programs. NMGIC is also receiving national attention from the Federal Geographic Data Committee (FGDC). FGDC has invited NMGIC to be recognized as an FGDC State Council. The invitation is being considered by the Board.

**Welcome and Thank You:** As a result of the spring election, the NMGIC Board has three new members. Newly elected to the Board are Rick Watson from San Juan College in Farmington; Robin Ransom from Doña Ana County Planning in Las Cruces; and Denise Bleakly with Sandia National Labs in Albuquerque. Bob Bewley, and myself were re-elected to the Board. On behalf of NMGIC and the Board I would like to express our gratitude to the outgoing Board members. John Peterson, Millie Eidson, and Bill Stone each made significant contributions to the Council and the Board. Thank you.

**Fall Meeting Plans:** Water is a precious commodity to everyone, especially to those of us living in an arid environment. With the drought of the past couple of years, water has become an even greater issue in our lives. Water rights; concerns about water quantity in the Middle Rio Grande Basin and the Mesilla Bolson; water conservation programs; and ground water contamination are a few of the water issues we are facing. Some have been elevated to higher priority by our congressmen. The Middle Rio Grande Basin water study, for example, is being undertaken by the U.S. Geological Survey at the request of Senator Pete Domenici. Other projects are studying contamination. There are also legal aspects to consider. These concerns are the focus of the fall meeting. Specific topics and speakers will be announced soon.

**Workshop Plans:** NMGIC would like to sponsor one or two GIS and/or GPS workshops during the next year. These workshops should respond to the needs and desires of our membership. Some suggestions are listed on page 8 in this newsletter. Please contact Denise Bleakly, NMGIC Workshop Coordinator with your ideas. Her email and phone are listed on page 8.

**Comments and Ideas:** Please contact any of the NMGIC Board with suggestions, comments, and ideas on programs, committees, or *The Map Legend*. NMGIC is your organization and strives to represent its members.

*Amy Budge, President*

## NMGIC Is On The Internet

NMGIC is now part of the Information Highway with its own Home Page. Designed and created by Cliff LeQueieu and John Ganter, Internet surfers will find information on NMGIC goals and objectives, committees, meetings, and membership. The site is served courtesy of the General Services Department, Information Systems Division. Please visit the site at:

<http://www.state.nm.us/nmgic>

## GISAC Notes

I announced at the Spring NMGIC meeting that the State Purchase Agreement with Environmental Systems Research Institute (ESRI) for GIS products and services would expire at the end of September of this year, and that as a result, the State would be entering into a new RFP process. I was in error in this regard, and I apologize for any inconvenience this may have caused. A review of the ESRI contract indicates that the State can option an additional year on the ESRI contract to carry us through September 1997.

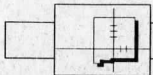
The decision to exercise the final option year on the contract will be made over the next two months. In order to make an informed decision, it is important that ESRI's performance under the contract be evaluated. I am asking, therefore, that anyone who had dealings with ESRI within the context of the State Purchase Agreement contact me if you have any comments - positive or negative - regarding your experience.

In a final note on the State Purchase Agreement with ESRI, the current Price Agreement Amendment was recently amended with an updated equipment and services schedule. Please contact me if you have need of the most current information. I can be reached at 505-827-2047 by phone, or by email at [billb@gsd.state.nm.us](mailto:billb@gsd.state.nm.us)

*Bill Baillargeon, GISAC Chair*







## Updated Geodetic Control CD-ROM Now Available

The National Geodetic Survey (NGS) disseminates geodetic control station information for points that comprise the National Spatial Reference System (NSRS). NSRS provides an accurate and consistent spatial coordinate system for a wide range of surveying, mapping, and other position-related activities across the nation. Successful relative or differential GPS techniques require use of NSRS. For the past few years, NGS has been distributing NSRS geodetic control data on CD-ROM.

For data distribution, the nationwide NSRS has been divided into five regions, and each region fits on one CD-ROM. The South-Central region CD-ROM includes data for New Mexico, Arizona, Utah, Colorado, Nevada, Texas, Oklahoma, Louisiana, and Arkansas. Included in the data for each control station are: horizontal position (latitude and longitude, State Plane Coordinate System and Universal Transverse Mercator planar coordinates, and Cartesian geocentric coordinates), height (orthometric and ellipsoid, if available), geoid height, and descriptive information (monumentation characteristics, narrative text describing how to find the station, and recovery information). When available, position and height information relative to multiple datums (North American Datum 1927/1983, National Geodetic Vertical Datum 1929, and North American Vertical Datum 1988) is listed.

Included on each CD-ROM is software that facilitates the extraction of specific control

## A Case of Mistaken Identity

Among the things that makes the study of place names fascinating is that little about them can be taken for granted. This certainly is true of their origins. The classic example is Green Mountain, which we would assume was named for its color, but that turns out to be named for a settler named Green. Examples in New Mexico include the Pecos River village of Villanueva, whose name one is tempted to translate "new town", but which in fact was named for the Villanueva family, whose members still live in the community.

And, in Sierra County east of T or C is a ridge named Chuchillo Negro. The Spanish *cuchillo* means "knife" but also is a descriptive metaphor for "ridge," so it's easy to assume the name means simply "black ridge." But in reality the name refers not to the ridge's appearance, but rather to an Apache leader, named, you guessed it, Black Knife, who camped at the ridge. Similarly, Rabbit Ear Mountain, north of Clayton in Union County, doesn't describe a rock formation shaped like a rabbit's ear, like dozens of other Rabbit Ear names around the country, but rather recalls a Plains Indian leader by that name. Heck Canyon in Colfax County was named not for the epithet, but for a family named Heck. Shiloh Flat in Otero County commemorates neither the place in the Bible nor the famous Civil War battle, but rather a race horse that roamed there. Miami, New Mexico, wasn't named for the city in Florida, but for Miami, Ohio, while Hollywood, New Mexico was named not for the famous Hollywood in California, but for a town in Florida.

But perhaps the most significant example of mistaken identity in New Mexico was Washington Pass. Almost everyone in the state - and especially on the Navajo Reservation - assumed the name commemorated either President Washington or the nation's capital. When Navajos learned the name actually honored Col. John Washington, leader of a military expedition against them, protests ensued that eventually led to the pass being renamed Narbona Pass.

Often the confusion is with places bearing names of animals. People often assume that Bear Canyon was named for an abundance of bears, and Lobo Spring once had a bunch of wolves near it. But the dean of American names scholars, George R. Stewart, argued that such names more likely referred to a specific incident involving an animal rather than a general abundance of them, and I think he's right.

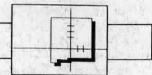
I recall the time when my family and I discovered a couple of abandoned baby squirrels in an unnamed canyon in the Sandias. Ever since then, we've referred to the canyon as Squirrel Canyon. Years hence I can imagine people saying the name was inspired by the canyon having lots of squirrels.

My favorite example, however, of how nothing about names can be taken for granted comes from Dr. Joseph Sanchez, director of the National Park Service's Southwest Spanish Colonial Research Center. He tells of hiking with his family up a ridge that they later named Gallina Ridge. The Spanish *gallina* means "chicken," but in New Mexico place names, it usually refers to wild turkeys. But not with the Sanchez family. They named the ridge Gallina Ridge because it was where they "chickened out" and turned back.

*Bob Julyan, Chair, Geographic Names Committee*

stations. Searches can be made by station name or geographic area. In addition, one can specify a minimum accuracy classification for the extracted stations. This capability allows, for instance, for the extraction of only stations that comprise the High Accuracy Reference Network (also known in New Mexico as the New Mexico GPS Reference Network). For each region, a new CD-ROM is generated each year from the database maintained by NGS. The 1996 version of the South-Central CD-ROM is now available. The price for each CD-ROM is \$50, and they can be ordered from NGS in Silver Spring, MD by calling 301-713-3242. For additional information, contact Bill Stone in Albuquerque at 505 768-3606.

*Bill Stone, Chair, GPS Committee*



## NMGIC Scholarship Awarded to Nathan Masek

Nathan Masek, a Masters Degree student in the Department of Geography at the University of New Mexico, is the recipient of NMGIC's 1996 Scholarship. Nathan's award winning research proposal is presented here.

### *Congestion Management System for the Albuquerque Metropolitan Planning Area*

A Congestion Management System (CMS) will be developed in a GIS environment that will be used by decision makers, mainly the Middle Rio Grande Council of Governments' (MRGCOG) Transportation Planning Task Group (TPTG) for the Albuquerque Metropolitan Area to assess the levels of congestion on the travel network. This system will utilize the travel network as developed by MRGCOG in conjunction with the City of Albuquerque's AGIS system. MRGCOG maintains an extensive database containing existing traffic volume information on this network. These count data, combined with travel-time data collected in 1993, offer the opportunity to develop a CMS of unprecedented scope and accuracy. Limitations of data are minimal since volume data exist for the entire network, and travel time data exist on the majority of the network. Geocoding of CMS IDs to the base network as well as extensive AML programming is required to develop the methodology for performing this analysis.

The basis for evaluating congestion on the network will be both a Volume/Capacity (VC) ratio as well as the amount of delay per mile. Capacities for each roadway segment will be developed based on the existing dimensional data such as number of lanes, divided/undivided, left-turn bays, signal progression, and the number of signals per mile. This capacity will then be combined with the traffic volume for both the AM and PM peak hour to produce VC ratios. For each CMS segment, this VC ratio will be used as a screen for further investigation of congestion. If a roadway segment has a VC ratio that equals or exceeds 1, that link will be subject to a computation of delay from the travel time data. Delay per mile, measured in seconds, will be used for this more extensive analysis. It is computed by taking the measured travel time minus the travel time at the posted speed and dividing by the length of the segment. There are three categories of congestion: <40 seconds of delay-no congestion, 40-80 seconds of delay-beginning to moderate congestion, and >80 second of delay-severe congestion.

Once the base-network is developed and areas of congestion are identified, mobile GPS technology will be utilized to collect additional travel-time data at the locations of severe congestion. Verification of the travel time data is necessary. Integration of the GPS to the GIS system is crucial.

The system can now be used in the prioritization of improvement projects by the TPTG. Maps and reports of the various categories of congestion will be produced. This information will be used as a basis and as a prioritization for the programming of improvement projects to the network designed to alleviate or reduce the severity of congestion. In addition, the more recent travel time data collected on specified segments can be used to "monitor" the effectiveness of each improvement project. The system, once developed, will become an integral part of MRGCOG's CMS program and will be easily updatable with new traffic volume and travel time information.

The project will be developed entirely in a GIS environment. All AML programming will be performed by myself. A menu-driven ARC/INFO GIS environment will be developed for this system that will provide the user with a simple and useful tool for the identification of congestion on a transportation network utilizing traffic-count data, as well as roadway dimensional data. Since this type of CMS project is, to my knowledge, unprecedented, previous studies that may be applicable are limited.

## RGIS News

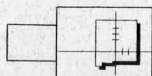
Data in the RGIS Clearinghouse are available on CDs. Volume 1 contains Resource Data including boundary files, cities and towns, climate, GNIS features, geographic reference files, geology, hydrography, soils, land use and land cover, hypsography, land status, transportation, vegetation, and others. Volume 2 contains data from TIGER/Line files, including roads, census tracts, blocks, and block groups, county boundaries, railroads, unified school districts, Indian reservation and trust land boundaries, and others. Volume 3 contains 1:100,000 scale digital elevation models and BLM land status files. All data on the CD are processed in ARC/INFO and are documented using the FGDC metadata standard. CD costs are \$150 each. Contact the RGIS Clearinghouse at 505-277-3622 for more information.

The RGIS Program's funding base was decreased by 24% during the 1996 New Mexico legislative session. This greatly impacts the Program's support of GIS activities statewide. The Program will continue to provide, at a reduced level, Clearinghouse services, new data releases on CD-ROM, and additional coverages to the Clearinghouse. It is hoped that more individualized support to local governments proposed for the coming year can still be provided. The Program is well received by State and local governments, and by industry users. An effort will be made to reinstate lost funds during the next legislative session.

**Applications for the 1997 Scholarship can be obtained by contacting Amy Budge, NMGIC President. Requests can be made by fax at (505) 277-3614, or by email at [abudge@spock.unm.edu](mailto:abudge@spock.unm.edu)**

Contact Mike Inglis at 505-277-3622 for more information.





## Summary of June 14th Board Meeting

The June 14, 1996 Board meeting was convened by President Amy Budge at 9:04 AM. The meeting was held at the Earth Data Analysis Center. Hillary Armstrong reported NMGC's current balance at \$7586.95.

NMGC officers are elected/appointed at the first Board meeting after the spring election. Amy Budge was re-elected President, Jessie Rossbach was elected Vice-President, Hillary Armstrong was appointed Treasurer, and Robin Ransom was appointed Secretary. Other duties of the Board are: Bob Bewley, Meetings Coordinator; Stan Morain; Public Relations; Denise Bleakly, Workshop Coordinator; Rich Friedman, Speakers Coordinator; and Rick Watson, Elections Coordinator.

The spring meeting was reviewed, and the Board agreed it was a good program, well received by our membership. Approximately 85 were in attendance during the morning session, and 60 returned after lunch for the afternoon session. There were seven commercial vendors. The facility was pleasant and met the needs of our meeting.

Discussion turned to plans for the fall meeting. After some discussion, the Board agreed that the topic for the fall meeting should revolve around water. Suggested presentations include a ground water project underway at Sandia National Labs, flooding in the Grand Canyon, transboundary water pollution, use of GPS by the State Engineer Office, Middle Rio Grande Basin project, legal aspects of water resources, and historical water resources reconstruction. Possible speakers were discussed. A suggestion was made to format the afternoon session as a workshop or forum on legal aspects and geospatial data for water issues, or to focus on water data and education. Final decisions on the program will be addressed at the next Board meeting. Exhibits at the Fall meeting will be by users of GIS, GPS, and related technologies, exhibiting applications projects. October 25, 1996 was set as a tentative date for the meeting.

A prototype NMGC home page was reviewed by the Board. The Page was developed by Cliff LeQuieu (EDAC) and John Ganter (Sandia National Labs). Bill Baillargeon offered to serve the site through GSD/ISD.

The Board discussed a replacement for Dave Love as Chair of the State Mapping Advisory Committee (SMAC). Dave resigned the position last fall, and a search has been in progress for a new chair.

NMGC has been invited by the Federal Geographic Data Committee (FGDC) to become an FGDC-recognized state council. NMGC would serve as a conduit between FGDC and New Mexico regarding networking, data sharing, and other related activities that further the development of the National Information Infrastructure. The Board agreed that Bill Baillargeon would be the point of contact, as he serves a similar role with the National States Geographic Information Council (NSGIC).

Committee reports were given by Gar Clarke, Bill Stone, and Bill Baillargeon. Gar is beginning to reorganize the Local Government Land Records Committee, which will meet in July. Bill Stone reported that the GPS Committee was reconstituted with five members. The GIS Committee is continuing work on the Large Scale Standards for Mapping. Bob Julyan submitted a report indicating the Geographic Names Committee would meet in July.

The next meeting is scheduled for Friday, August 23, 1996 at EDAC. The meeting was adjourned at 11:54 AM.

## 1996 Election Results

Five members were elected to the NMGC Board of Directors. Re-elected were Bob Bewley and Amy Budge. New members to the Board are Robin Ransom, Rick Watson, and Denise Bleakly. The Board has nine members. Four positions are elected one year and five are elected in alternate years.

A complete list of the Board and



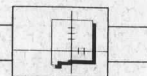
## New Change Detection Software

LUCAS is a new change detection software package designed to allow non-expert users to employ satellite and airborne imagery to automatically monitor change and to update GIS coverages. The software runs on UNIX, PC (Windows and Windows 95) and Macintosh platforms. The LUCAS CD-ROM includes a multimedia tutorial on change detection and comes bundled with multi-temporal Landsat TM, SPOT, IRS, and ADAR sample data. A demonstration license costs \$25; the full license fee is \$750. Quantity and academic discounts are available. For additional details, contact:

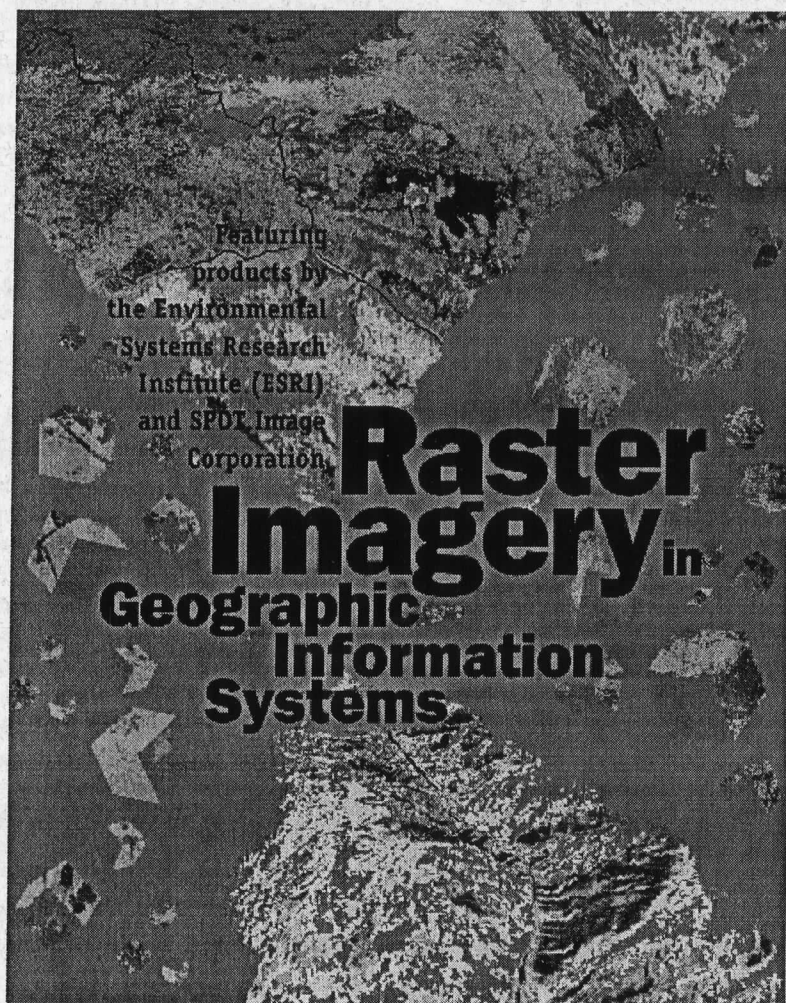
Pacific Meridian Resources  
5915 Hollis Street, Bldg. B  
Emeryville, CA 94608  
(510) 654-6980 (v); (910) 654-5774 (f)  
email: [pmrp@teleport.com](mailto:pmrp@teleport.com)

*From RSSG Newsletter, July 1996*





## New GIS Publication

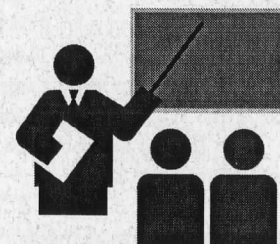


*Raster Imagery in Geographic Information Systems*, edited by Stan Morain and Shirley Baros, describes raster data structures and applications. It is a practical guide to how raster imagery is collected, processed, incorporated, and analyzed in vector GIS applications. It includes over 50 case studies using raster imagery in diverse applications. The softcover, 600 page book can be ordered from the publisher, **High Mountain Press**, 2530 Camino Entrada, Santa Fe, NM 87505-4835, phone 505-471-8822, fax 505-438-9633. Cost is \$59.95.

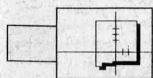
## Summary of URISA GPS Workshop

The GPS Workshop held during the 1996 URISA annual meeting in Salt Lake City, UT offered a one day introductory class, followed by a half day field instruction. The *Introduction to Global Positioning Systems* was designed to familiarize participants with global positioning systems through an overview of the technology, and its capabilities, applications, and relationship to GIS. Twelve participants attended this session. The follow-up class, *Hands-On GPS* was a half day field session for participants to gain experience in using GPS and laser-ranging equipment from various manufacturers. The class learned how to make measurements with the instruments and how to post-process the data. The workshop instructors were David Zenk from the Dunwoody Institute in Minneapolis, MN; Doug Fuller with Aero-Metric, Inc in Sheboygan, WI; and Doug Paulson, Earth Data Analysis Center in Albuquerque.

The next opportunity to attend this workshop is during the 1996 GIS-LIS Denver conference in November 1996. Watch for the preliminary program for details, or contact URISA at 900 Second St, NE, Suite 304, Washington, DC 20002. Phone 202-289-1685; fax 202-842-1850, email: [training@urisa.org](mailto:training@urisa.org)







## NRCS Digitizing Soil Surveys

Digitizing pucks and scanners will be busy this summer and fall as the USDA Natural Resources Conservation Service in New Mexico embarks on a marathon of soil survey digitizing. The need is great for digital soils data, both internal to NRCS and for other users.

The soil survey digitizing process is lengthy with many steps involved. Soil surveys published on non-orthophotos must be recompiled onto an ortho base, then digitized, either manually or by scanning. The digital data then undergo an edit process to ensure they meet NRCS standards for a Soil Survey Geographic (SSURGO) database. Soil surveys published on orthophotography will not require recompilation, and can be digitized from the publication prep sheets. Digital products derived from the SSURGO process include spatial components (soil lines, attributes, and special soil features), tabular soils information, and metadata.

In 1995, NRCS asked states to identify surveys that could be digitized in the shortest time frame. New Mexico proposed to digitize five surveys requiring the least compilation work. These are Union, Colfax, and Luna County soil surveys which were published on orthophotography, and northern Chaves County, and Lincoln County soil surveys which were already recompiled to USGS orthophoto base maps. The NRCS GIS section has only two staff. Therefore, the proposal also included hiring temporary employees to accomplish the tasks. Because of delays in funding, it was well into April before we could announce two temporary positions and begin digitizing.

We are well underway now. NRCS hired two highly skilled temporaries to work on SSURGO digitizing only. We are also pleased to have been assigned a UNM student hired under a national hispanic opportunity program. He is working primarily on digitizing soils. We have another student working on compilation of the Eddy County soil survey that is



## EDAC Captures First Place in International Competition



Earth Data Analysis Center's John Lovato and Noreen Breeding developed an award winning application using ESRI's ArcView software. Their application, the Antelope Management Information System (AMIS), received first place honors in ESRI's 1996 ArcView/Avenue Application Development competition, an international contest. AMIS was created by EDAC for the New Mexico Department of Game and Fish to assist them in managing pronghorn antelope. The system allows game managers to easily query, analyze, and display maps related to their management needs. Antelope hunt ranch boundaries are presented in electronic and hardcopy map formats and are used to guide hunters to the appropriate hunting grounds.

The source documents were provided by the Department of Game and Fish. These were photocopies of BLM 1:100,000 scale surface management status maps and Rand McNally road maps on which ranch boundaries were drawn. Local roads, landmarks, and section lines were used as reference features. Digital basemap layers were obtained from the RGIS Clearinghouse.

supplied to us through an agreement with the Water Resources Research Institute, New Mexico Department of Agriculture, and Earth Data Analysis Center. What a staff!

The process we have developed involves 6 steps. The first step is to prepare materials for scanning. This involves cleaning up the compilation sheet or preparing a scan sheet where the surveys published in third-quad format are reassembled onto a full quad. These sheets are scanned using a LDS4000 or Tangent scanner. The raster file is edited and vectorized using LTPlus or LT4X. NRCS has developed a procedure whereby vectorized data derived from LT4X can be directly linked with GRASS 4.13 for finishing.

Special features are those spot symbols seen in a published soil survey. It's important to capture this information. These spots are manually digitized in GRASS and become a part of the SSURGO database. Metadata are created for each soil survey. Data are sent to the NRCS National Cartography and Geospatial Center (NCG) in Fort Worth, TX for final review. Once a survey is certified SSURGO, it can be obtained from NCG for a minimal fee. The data are archived by quad for each soil survey area.

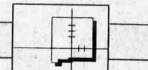
NRCS-New Mexico hopes to add all five surveys to SSURGO by December 1996. Contact Jessie Rossbach, NRCS at 505-761-4437 for more information. NRCS is also looking for partners in this effort.

## HELP!

This space (and more) is for you.  
Articles and stories about your projects, programs, activities, and other items of interest can be shared with other NMGIC members.

Please send by fax or email to:  
Stan Morain, Public Awareness Coordinator, at  
505-277-3614  
[edac@spock.unm.edu](mailto:edac@spock.unm.edu)





## GIS Classes

Introduction to *ArcView* classes are scheduled for the following dates and locations:

- August 10-11 in Phoenix
- August 22-23 in Albuquerque
- September 19-20 in Tucson
- September 26-27 in Albuquerque
- October 10-11 in Phoenix
- October 24-25 in Albuquerque
- November 2-3 in Flagstaff
- November 15-16 in Denver
- November 17-18 in Denver

Classes in Customizing *ArcView* with *Avenue* are scheduled for the following dates and locations:

- August 14-16 in Phoenix
- August 19-21 in Albuquerque
- October 21-23 in Albuquerque
- November 4-6 in Flagstaff
- November 22-24 in Denver

An Introduction to *Network Analyst* for *ArcView* is scheduled for November 5 in Flagstaff.

Introduction to *Spatial Analyst* for *ArcView* classes will be:

- November 4 in Flagstaff
- November 16 in Flagstaff

For more information on GIS classes contact:

SAIC, GIS Business Center  
*lawlrm@aires.tucson.saic.com*  
 520-570-7647 (voice)  
 520-790-9765 (fax)



## Workshops! Workshops! Workshops!

The NMGIC Board needs your help in determining the types of GIS/GPS workshops the membership would like. NMGIC would like to sponsor one or two continuing education type workshops in the up-coming year. Some suggestions have been:

1. A workshop on mapping and the World Wide Web
2. *ArcView* 2.1 Training
3. *ArcView* 3.0 Training (when it is released)
4. Additional USGS workshops on the National Spatial Data Infrastructure

If you have any additional ideas for workshops, or are interested in the workshops listed above, please contact Denise Bleakly, NMGIC Workshop Coordinator, at 284-2535, or email to *drbleak@envc.sandia.gov*. Additionally, if you or your company offer courses, please contact Denise.

## JOB BOARD

### Employment Wanted

#### Life Scientist with Image Processing/GIS Skills

Recent MS, seeks position using digital imagery as a primary source of environmental data. Experience with image acquisition, georeferencing, resampling, mosaicking, classification, accuracy assessment, statistics, and map or vector coverage production. Field skills include plant ID.

Abraham Franklin  
 505-242-1551  
*franklin@ers.unr.edu*

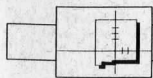
My name is Becky Davis, and I am seeking employment (permanent or temporary) that will utilize and enhance my geographical skills. This past June I graduated with a BA in Geography from the University of New Mexico. In addition, for the past two and half years I have worked at the Division of Government Research (DGR) as a GIS Specialist developing Crash Location Maps for urban areas of New Mexico. My work at DGR required the operation of several computer software packages including: ARC/INFO, *ArcView*, and SAS on multiple computer platforms (IBM MVS, UNIX, and PC DOS/WINDOWS). Please contact me at (505) 281-3719 (home) or at (505) 277-6540 (fax).

### Positions Available

Two senior GIS positions (GS 12-13) will be available in August. Announcements can be obtained from EPA Region 8 Human Resources Office at (303) 312-6190, or contact the job vacancy phone line at 303-312-6259.

Non-GIS jobs with EPA, Region 6 in Dallas, TX. Contact EPA Region 6 Job Hot Line at 214-665-6560.





## Cool Internet Web Sites

To help our membership keep current on what is available on the Internet, we will be compiling mapping and GPS related web sites and printing them in the *Map Legend*. If you come across something you think the rest of the NMGIC members might find useful, please contact Denise Bleakly at 284-2535 or email to [drbleak@envc.sandia.gov](mailto:drbleak@envc.sandia.gov) to let her know and she will add it to the list for the next newsletter. The following sites are listed in no particular order.

- |  |   |
|--|---|
| • Federal Geographic Data Committee (FGDC) | <a href="http://fgdc.er.usgs.gov">http://fgdc.er.usgs.gov</a>   |
| • USGS Home Page                           | <a href="http://internet.er.usgs.gov">http://internet.er.usgs.gov</a>                                 |
| • USGS National Mapping Information        | <a href="http://www-nmd.usgs.gov/">http://www-nmd.usgs.gov/</a>                                       |
| • USGS Online Data                         | <a href="http://edcwww.cr.usgs.gov/doc/edchome/ndcdb">http://edcwww.cr.usgs.gov/doc/edchome/ndcdb</a> |
| • GIS Law and Policy Institute             | <a href="http://www.nationsweb.com/glislaw">http://www.nationsweb.com/glislaw</a>                     |
| • ER Mapper Site                           | <a href="http://www.ermapper.com">http://www.ermapper.com</a>   |
| • ESRI Site                                | <a href="http://www.esri.com">http://www.esri.com</a>   |
| • URISA                                    | <a href="http://www.urisa.org">http://www.urisa.org</a>   |
| • GIS World                                | <a href="http://www.gisworld.com">http://www.gisworld.com</a>   |
| • RGIS Program                             | <a href="http://rgis.unm.edu:8080">http://rgis.unm.edu:8080</a>                                       |
| • NMGIC                                    | <a href="http://www.state.nm/nmgic">http://www.state.nm/nmgic</a>                                     |

## Calendar

Pecora 13 Symposium, "Human Interactions with the Environment: Perspectives from Space," Sioux Falls, SD, August 20-22, 1996. Contact: Internet: <http://edcwww.cr.usgs.gov/pecora13.html> Telephone: 605 594-6551. Fax: 605 594-6083.

NSGIC 6th Annual Conference "Sharing Resources and Solutions", Tucson, AZ, September 14-18, 1996. Contact: Catherine M. Beinhauer, NSGIC Administrator, 45 Lyme Rd., Suite 304, Hanover, NH 03755. Telephone: 603 643-1600. Fax: 603 643-1444.

ION GPS-96, Kansas City, MO, September 17-20, 1996. Contact: Institute of Navigation, 1800 Diagonal Rd, Suite 480, Alexandria, VA 22314. Telephone: 703 683-7101. Fax: 703 683-7177.

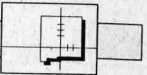
Trimble 1996 Surveying & Mapping Users Conference & Exposition, San Jose, CA, October 2-4, 1996. Contact: Trimble Users Conference, 485 Potrero Ave., Sunnyvale, CA 94086. Telephone: 408 481-8465. Fax: 408 481-8488. Email: [user\\_expo@trimble.com](mailto:user_expo@trimble.com)

NACIS XVI (North American Cartographic Information Society) 16th Annual Meeting, "Cartography and the Internet", San Antonio, TX, October 2-5, 1996. Contact: Michael Peterson, Department of Geography and Geology, University of Nebraska at Omaha, Omaha, NE 68182-0199. Telephone: 402 554-4805. Email: [geolib@cwis.unomaha.edu](mailto:geolib@cwis.unomaha.edu)

1996 ESRI Southwest Users Group Conference "GIS: Bring the Pieces Together", Flagstaff, AZ, November 7-8, 1996. Contact: 1996 SWUG, PO Box 2071, Prescott, AZ 86302-2071. Fax: 520 771-3257.

GIS/LIS '96 Annual Conference and Exhibition, Denver, CO, November 19-21, 1996. Contact: GIS/LIS '96, 5410 Grosvenor Lane, Suite 100, Bethesda, MD 20814-2122. Telephone: 310 493-0200. Fax: 301 493-8245.





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Albuquerque, NM 87110  
Phone: 505-294-5051  
Fax: 505-296-2672

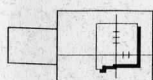
Map Link  
25 East Mason St.  
Santa Barbara, CA 93101  
Phone: 805-964-4402  
Fax: 805-962-0884  
Email: 70413.1624@compuserv.com

NM State Highway and  
Transportation Dept.  
PO Box 1149, 1120 Cerrillos Road  
Santa Fe, NM 87504  
Phone: 505-827-5289  
Fax: 505-989-4983

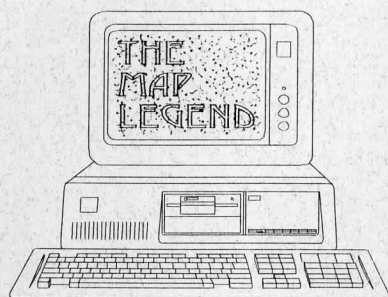
SAIC GIS Business Center  
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Tucson, AZ 85711-3796  
Phone: 520-570-7647  
Fax: 520-790-9765  
Email: lawlerm@aries.tucson.saic.com

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# THE MAP LEGEND



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